

TO: Brian G. Morrison

FROM: Richard T. Carson



RE: Comments on Exposure of Recreational Anglers to South Fork Wind

DATE: May 24, 2021

In response to your request, I have examined the three-page memo entitled "Estimated Exposure of Recreational Anglers to South Fork Wind" (hereafter SFW Memo) by Thomas Sproul dated March 26, 2021. My comments here pertain to the appropriateness of the use of my study (Carson, Hanemann, and Wegge, 2009) for the purpose of a benefit-transfer exercise.¹

"Benefit-transfer is the adaptation of existing value information to a new context" (Rosenberger and Loomis, 2017).² With any benefit-transfer exercise, an analyst should seek to identify situations where large well-executed studies have been done that are as "close" as possible with respect to (a) the natural resource of interest, (b) the change(s) involving that natural resource that are of interest, (c) the population using the resource, and (d) the time period when the study was conducted. In addition, it is important that the economic model upon which the analysis is based uses what are now considered to be appropriate techniques. The use of the 2009 Carson, Hanemann, and Wegge study (hereafter CHW) as the primary source of estimates in a situation involving the potential effect of offshore wind turbines on recreational fishing in Atlantic waters south of Rhode Island is incongruent with all these standard criteria for studies used in a benefit-transfer exercise.

Let me take up each of these criteria in turn. The first involves substituting Alaskan Kenai king salmon caught from a riverbank for cod fish and other species, like shark or tuna, caught offshore using boats in an area known as Cox's Ledge. King salmon are the world's largest species of salmon and Kenai king salmon are the largest of the king salmon. They are prized around the world as the trophy fish to mount on a wall. Like many salmon spawning runs up a river (here the Kenai River whose prime fishing section is roughly a 3-hour drive south from Anchorage), the spawning run is concentrated in a narrow period of several weeks, allowing little temporal substitution (because of their unique size, tied explicitly to the Kenai River) and little spatial substitution for the same trophy potential. They are caught from the shore in what is typically a very crowded, almost party-like atmosphere, where gaffing hooks had to be banned due to injuries. It is hard to see any direct correspondence here to the Rhode Island situation of current interest.

The second involves the nature of the policy change being considered. The modeling in CHW was focused on two types of changes, both directly related to the Alaska Department of Fish and Game's regulatory objective of ensuring that an adequate number of salmon (distinguished by salmon species and location) made it up a river to spawn so that there will be enough salmon returning in future years to support the relevant commercial and recreational fisheries. To this end, they measured and publicized past catch levels (reported by location and species) and put out estimates of current fishing quality (by location/species/week). The model in CHW allows an assessment of the economic value to recreational fishers of changes in these variables. The model in CHW is also designed to look at short run site closures,

¹ R.T. Carson, W.M. Hanemann and T.C. Wegge (2009), "A Nested Logit Model of Recreational Fishing Demand in Alaska," *Marine Resource Economics* 24(2): 101-129.

² R.S. Rosenberger and J.B. Loomis (2017), "Benefit-Transfer," in P.A. Champ, K.J. Boyle and T.C. Brown, eds., *A Primer on Nonmarket Valuation*, Dordrecht, Netherlands: Springer.

on the order of a weekend to a couple of weeks, for a particular species at a specific location or a small number of locations. The reason for these closures is that if Alaskan Department of Fish and Game monitoring programs detect too few salmon of a particular species making it far enough up a specific river to spawn (and thus maintain the biological viability of the stock), they shut down recreational fishing for that species and location on that river for some short time window. The CHW model allowed the Department of Fish and Game to predict what other fishing sites might also need to be closed at the same time as the at-risk site due to substitution decisions by those who otherwise would have gone to the newly closed site. These diverted trips raised the possibility that a salmon run on another river might get wiped out due the shift in location choices. CHW's example Kenai king salmon calculation used in the SFW Memo is for this type of change. It does not represent the sort of changes that appear to follow from the South Fork Wind Memo, which involve the construction and operation of offshore wind turbines.

As an aside here, while generally agreeing with the view attributed to English et al. (2019) that the fixed cost of boats can be an important element in considering recreational fishing decisions, the context here is very different than that involving the BP Deepwater Horizon oil spill, which idled a large number of recreational boats for a considerable period. The adjustment made in the SFW memo appears to be ad hoc and unwarranted without some clear explanation as to why the stock of boats used in recreational fishing would undergo a substantial change due to the SFW project. The same can be said of the argument that an adjustment might need to be made for "follow-on sites". The SFW Memo seems to confuse this concept, which is a characteristic of recreational fishers who have more time flexibility and more knowledge of alternative site attributes, with being a characteristic of a site itself. Again, this adjustment, not standard in the literature, is being raised in a very different context with a very different population. Likewise, the use of information from responses to a survey of what are likely to be among the most avid recreational fishers in the state (e.g., the Rhode Island Saltwater Anglers Association) is not likely to be representative of state residents who engage in recreational fishing. This is why state and federal agencies go to considerable lengths to interview random samples of the relevant population.

Third, if one were to compare the populations of U.S. states, Alaska and Rhode Island would not be at the top of the list of close matches on most dimensions. Of particular importance here is the concentration of South-Central Alaska's population into a few main cities like Anchorage, and the fact that most of its recreational fishing is motor vehicle based. While the CHW paper does look at some saltwater boat-oriented fishing, that is not the major focus of the paper nor is it used in the SFW Memo. What is well-known is that fishing on lakes and rivers tends to be quite different than saltwater boat fishing. The compactness of Rhode Island relative to the open expansiveness of Alaska probably accentuates these differences further and in unknown ways. Further, in addition to influencing site choice decisions, differences in the spatial configuration of the two states will result in very different expenditure patterns. No effort appears to have been made to adjust for any of these differences, which is commonly done in benefit-transfer exercises.

Fourth, the data presented in CHW were collected in 1986. This is 35 years ago. It would not be unusual to see a study of this vintage used in a meta-analysis summarizing the informational content of a large number of outdoor recreation studies, and, particularly, where there was interest in how valuation estimates had changed over time. What is unusual is the reliance on a single study of this age, when the match quality on other dimensions is not good, and there have been so many subsequent economic studies done looking at recreational fishing.

The last criterion involves the economic modeling framework and the specific statistical techniques used in the study from which the estimates are being taken relative to the current state-of-the-art. The long period from 1986 until the publication of CHW in 2009 in the main field journal in environmental and natural resource economics specializing in fisheries issues is atypical. CHW had an unusual story to tell. Its submission for publication was explicitly elicited by the journal's editor because of the substantive role the study had played, as an unpublished report and conference paper, in the development of economic approaches to modeling outdoor recreation, particularly fishing. The CHW paper has a long "Forward" section that describes these innovations and how they were implemented. This Forward also explains that the paper was not previously submitted for publication due to computational limits at the time that prevented the estimation of the full model using a theoretically correct but computationally very intensive approach, rather than the empirically-feasible sequential approximation approach the CHW analysis used. The sequential approximation model, which took hours to run on one of the world's fastest CRAY supercomputers, can now be estimated in under an hour on a high-end desktop computer, due both to large scale increases in computer memory (RAM) and improvements in key algorithms. Correct estimation of the full model is now feasible but still difficult. Nevertheless, the statistical approach used was sufficiently ahead of its time that CHW's economic value estimates might still be useful in a benefit-transfer context if the other match quality aspects were much closer than those in the SFW Memo.

The same cannot be said for the age of the data and appropriateness of the methodology underlying the expenditure analysis that appears in CHW. That expenditure analysis relies on one of the earliest versions of IMPLAN, which was developed for the U.S. Forest Service, and what appears to be the first data collected for an Alaskan specific input-output table. The early IMPLAN type input-output models were heavily criticized by economists because they assumed there was no substitution. Effectively, a specific output was always produced by the same bundle of inputs in fixed proportions; thus, reducing that output always reduced inputs by those fixed proportions. Further, reducing a particular output did not lead to substitution toward other outputs. Expenditure analyses were important to politicians because they allowed claims to be made about the large amount of primary and secondary economic activity that stemmed from a new factory or, in the CHW case, recreational fishing. Over the years, the IMPLAN system has become considerably more sophisticated in terms of the detail and spatial extent of data collection effort, and, more importantly, in building models that allow for more dynamic flexible patterns of substitution. Because of this, little credence should be given to the expenditure analysis in the SFW Memo.

To summarize, the experience of fishing for Kenai king salmon does not represent a close match to the experience of fishing for cod or other species off the coast of Rhode Island along any of the obvious dimensions, including salt vs. fresh water, method of catch, pattern of temporal and spatial substitution possibilities, or trophy potential. The policy related impacts that appear to be contemplated in the SFW Memo bear no resemblance to the two main policy related impacts that were the focus of CHW. The characteristics of populations of Alaska and Rhode Island are divergent, particularly with respect to the spatial configuration of the population of South-Central Alaska and the recreational fishing sites that are the focus of the CHW study vs. those in Rhode Island. This suggests that the underlying model of fishing site choice, and, particularly, expenditure patterns, are likely to be substantively different. Finally, the data used in the CHW paper were collected 35 years ago. While the approach for modeling put forward in CHW was quite innovative at the time and later widely adopted, this cannot be said for the expenditure analysis in CHW, which was subject to limitations at the time that likely led to overestimating changes in expenditures. For these reasons, the use to which CHW is put in the SFW Memo is inappropriate.

RICHARD T. CARSON is a Distinguished Professor in and former Chair of the Department of Economics at the University of California, San Diego. Carson served as President of the Association of Environmental and Resource Economists (AERE). He is an elected Fellow of AERE, the American Association for the Advancement of Science, and the American Association for the Advancement of Science and of the Agricultural and Applied Economics Association. Carson previously served as Research Director for International Environmental Policy at the University of California's Institute on Global Conflict and Cooperation and as a Senior Fellow at the San Diego Supercomputer Center. Carson received a Ph.D. in resource economics and M.A. in statistics from the University of California, Berkeley in 1985 and an M.A. in international relations from George Washington University in 1979. Carson has extensive experience in assessing the benefits and costs of environmental policies. His specialty is valuing non-marketed goods and new commercial products using a wide array of techniques. He has estimated the benefits of the U.S. Clean Water Act, removing low-level carcinogens from drinking water, protecting groundwater aquifers, economic impacts associated with fisheries management practices and health and visibility improvements due to air quality changes. In other studies, he has examined the benefits of visibility improvements in the Grand Canyon, preventing residential water shortages in California cities, restoring Everglades National Park, the addition of the Kakadu Conservation Zone to Kakadu National Park in Australia, and of wetlands in preventing hurricane damage. He served as a principal investigator on the government's economic damage assessments for the Exxon Valdez oil spill, large scale DDT and PCB contamination off the Los Angeles coast and the Deepwater Horizon oil spill. He is a frequent commentator on natural disasters. Carson won the 2000 Knowledge Discovery and Data Mining Cup for Web Analytics and was Chief Scientist for the start-up firm Memetrics, which is now part of Accenture Marketing Sciences. Carson's work on forecasting Chinese carbon dioxide emissions received considerable international attention. His econometric research has focused on experimental and sampling designs, computer intensive and robust statistical techniques, discrete choice models and forecasting. Carson has designed surveys for data collection in many areas.

Professor Carson has been a consultant to a number of major corporations, non-profit organizations, international organizations and government agencies, including the Alaska Department of Fish and Game, Australian Resource Assessment Commission, California Attorney General's Office, California Department of Fish and Game, Electric Power Research Institute, Environment Canada, Interamerican Development Bank, Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, National Park Service, National Oceanic and Atmospheric Administration, OECD, U.K. DEFRA, U.K. MOJ, United Nations, U.S. DOJ, U.S. EPA, and the World Bank. Carson has been a visiting professor at the University of New South Wales, University of Oslo, and the University of Sydney, a Faculty Research Fellow at the National Bureau of Economic Research and a Continuing Consultant at Resources for the Future. He served on the National Academy of Science's Committee on Oil Spill Research and Development and as a member of an Academy committee reviewing procedures for water resource planning procedures. He was Program Chair for the Second World Congress of Environmental and Resource Economists. Carson is among the most cited environmental economists in the world. His publications appear in the *American Economic Review*, *American Political Science Review*, *Ecological Economics*, *Energy Policy*, *Environment and Development Economics*, *Environmental and Resource Economics*, *International Journal of Forecasting*, *Journal of Economic Perspectives*, *Journal of Environmental Economics and Management*, *Journal of Environmental Management*, *Journal of Risk and Uncertainty*, *Journal of the Association of Environmental and Resource Economists*, *Journal of Urban Economics*, *Land Economics*, *Marine Resource Economics*, *Marketing Letters*, *Quarterly Journal of Economics*, *Proceedings of the National Academy of Sciences*, *Public Opinion Quarterly*, *Review of Economics and Statistics*, *Review of Environmental Economics and Policy*, *Risk Analysis*, *Science*, *Water Resources Research*, and other professional journals. He is the author or editor of eight books. With Robert Mitchell, he wrote *Using Surveys to Value Public Goods: The Contingent Valuation Method*, which won the Association of Environmental and Resource Economists' Publication of Enduring Quality Award.

RICHARD T. CARSON
Department of Economics
University of California, San Diego
La Jolla, CA 92093-0508
(858) 534-3383 office
(858) 534-7040 fax

EDUCATION

University of California, Berkeley, 1982-1985.

Ph.D., Department of Agricultural and Resource Economics, December 1985. National Wildlife Federation Fellowship. Teaching Associate.

M.A., Department of Statistics, 1985.

George Washington University, 1977-1982.

M.A., School of Public and International Affairs, 1980. Scottish Rite Fellowship. Supplemental courses in econometrics and survey techniques, 1980-1982.

Mississippi State University, 1973-1977.

B.A. French/Political Science, 1977. Academic Scholarship.

PROFESSIONAL EXPERIENCE

University of California, San Diego, 1985-present.

Department of Economics. Distinguished Professor, 2015-present, Chair 2002-2006, Professor, 1996-2015; Associate Professor, 1990-1996; Assistant Professor 1985-1990. Responsible for teaching graduate courses in natural resource economics and econometrics, and undergraduate courses in environmental economics, energy economics, public policy, and marketing. Chair, Chancellor's Advisory Committee on Sustainability; Co-Chair, Academic Senate Sustainability 2.0 Task Force, Chair; Social Science Computing; Vice Chair, Academic Senate Committee on Computing; Member, Academic Senate Committees on Educational Policy and Undergraduate Statistics; Member, Environmental Studies & Environmental Sciences Program Steering Committees. Senior Fellow, San Diego Super Computer Center. Research Director for International Environmental Policy, UC Institute for Global Conflict & Cooperation. Affiliated Faculty Member: Graduate School of Global Policy & Strategy; Department of Political Science.

University of South Australia, 2014-2015.

Institute for Choice, Distinguished Research Professor.

Visiting Professor/Distinguished Research Professor.

University of Sydney 1995, 1997; University of Oslo 1996; UNSW 2005; UTS 2008-2013.

Association of Environmental and Resource Economists

President, 2004-2007; Program Chair World Congress, 2002. Elected Fellow 2010.

Natural Resource Damage Assessment, Inc., 1990-2001

Principal. Assessed the economic damages associated with several major environmental incidents, including the Exxon Valdez oil spill for the State of Alaska.

Resources for the Future, October 1979-1990

1982-1990, Consultant/Associate Research Program. Staff Member. 1979-1982.

Southern Research Associates, 1977-1979.

Political and Marketing Analyst.

PUBLICATIONS

- (and Thomas Sterner, Marc Hafstead, Peter Howard, Sverker Carlsson Jagers, Gunnar Köhlin, Ian Parry, Ryan Rafaty, E Somanatan, Jan Christoph Steckel, Dale Whittington, Francisco Alpizar, Stefan Ambec, Claudia Aravena, Jorge Bonilla, Reza Che Daniels, Jorge Garcia, Niklas Haring, Kanishka Kacker, Suzi Kerr, Haileselassie Medhin, Pham Khanh Nam, German Romero, Olof Johansson Stenman, Mike Toman, Jintao Xu, and Min Wang), "Funding Inclusive Green Transition through Greenhouse Gas Pricing," *ifo Dice Report*, forthcoming.
- (and Joffre Swait, Joffre, Jordan J. Louviere, Bart Frischknecht, Jorge Araña, Christine Eckert, Tiago Ribeiro, Simon Fifer, John M. Rose, Andrew Heathcote, Scott Brown, "Choice Modeling," in *Oxford Bibliographies in Marketing*, (Oxford: Oxford University Press, forthcoming).
- (and W. Michael Hanemann and Dale Whittington), "The Existence Value of a Distinctive Native American Culture: Survival of the Hopi Reservation," *Environmental and Resource Economics*, vol. 75, 2020.
- (and Fanglin Sun), "Coastal Wetlands Reduce Property Damage During Tropical Cyclones," *Proceedings of the National Academy of Sciences*, vol. 117, 2020.
- (and Towhidul Islam, and Jordan J. Louviere), "Modeling Stockpiled Product Purchase Decisions Using Volumetric Choice Experiments," *Proceedings of the 21st Annual Sawtooth Software Conference* (Sequim, WA: Sawtooth Software, 2020).
- (and Mikolaj Czajkowski), "A New Baseline Model for Estimating Willingness to Pay from Discrete Choice Models," *Journal of Environmental Economics and Management*, vol. 95, 2019.
- (and Tamara L. Sheldon and J.R. DeShazo), "Demand for Green Refueling Infrastructure," *Environmental and Resource Economics*, vol. 74, 2019.
- (and Jacob LaRiviere), "Structural Uncertainty and Pollution Control: Optimal Stringency with Unknown Pollution Sources," *Environmental and Resource Economics*, vol. 71, 2018.
- (and Jordan J. Louviere), "Estimation of Broad-Scale Tradeoffs in Community Policing Policies," *Journal of Benefit-Cost Analysis*, vol. 8, 2017
- (and Tiago Ribeiro, Jordan J. Louviere, and John M. Rose), "Possible Design-Induced Artefacts Associated with Designs for Discrete Choice Experiments," *Journal of Statistical Theory and Practice*, vol. 11, 2017.
- (and Richard C. Bishop, Kevin J. Boyle, David Chapman, W. Michael Hanemann, W.M., Barbara Kanninen, Raymond J. Kopp, Jon A. Krosnick, John List, Norman Meade, Robert Paterson, Stanley Presser, V. Kerry Smith, Roger Tourangeau, Michael Welsh, Jeffrey M. Wooldridge, Matthew DeBell, Colleen Donovan, Matthew Konopka, and Nora Scherer), "Putting a Value on Injuries to Natural Assets: The BP Oil Spill. *Science*, vol. 356, 2017. "Response" to "Contingent Valuation Flawed Logic?" *Science*, vol. 357, 2017.
- (and Tamara L. Sheldon and J.R. DeShazo), "Electric and Plug-In Hybrid Vehicle Demand: Lessons for an Emerging Market," *Economic Inquiry*, vol. 55, 2017.
- (and J.R. DeShazo and Tamara L. Sheldon), "Designing Policy Incentives for Cleaner Technologies: Lessons from California's Plug-in Electric Vehicle Rebate Program,"

- Journal of Environmental Economics and Management*, vol. 84, 2017.
- (and Jennifer T. Le and Lisa A. Levin), "Incorporating Ecosystem Services into Environmental Management of Deep-Seabed Mining," *Deep Sea Research Part II*, vol. 137, 2017.
- (and Jon Strand, Ståle Navrud, Ariel Ortiz Bobea, and Jeffrey R. Vincent), "Using the Delphi Method to Value Protection of the Amazon Rainforest," *Ecological Economics*, vol. 131, 2017.
- (and Kevin Boyle, Robert Paterson, Christopher Leggett, Barbara Kanninen, and John Molenar), "Valuing Shifts in the Distribution of Visibility in Class I Visibility Areas," *Journal of Environmental Management*, vol. 173, 2016.
- (and M. Burke, Craxton, C.D. Kolstad, C. Onda, H. Allcott, E. Baker, L. Barrage, R. Carson, K. Gillingham, J. Graff-Zivin, M. Greenstone, S. Hallegatte, W.M. Hanemann, G. Heal, S. Hsiang, B. Jones, D.L. Kelly, R. Kopp, M. Kotchen, R. Mendelsohn, K. Meng, G. Metcalf, J. Moreno-Cruz, R. Pindyck, S. Rose, I. Rudik, J. Stock and R. Tol), "Opportunities for Advances in Climate Change Economics: Target Carbon's Costs, Policy Designs and Developing Countries," *Science*, vol. 352, 2016.
- (and Jordan J. Louviere), "When the Ayes Don't Have It: Supplementing an Accept/Reject DCE with a Case 2 Best-Worst Scaling Task," in Best-Worst Scaling: Theory, Methods and Applications," in Jordan J. Louviere, Terry N. Flynn, and A.A.J. Marley, eds., *Best-Worst Scaling: Theory, Methods and Applications* (New York: Cambridge University Press, 2015).
- (and Daniel Moyer, Samuel L. Carson, Thayne Keegan Dye and David Goldbaum) "Determining the Influence of Reddit Posts on Wikipedia Pageviews," in *Proceedings of the Ninth International AAAI Conference on Web and Social Media*, (Palo Alto, CA: Association for the Advancement of Artificial Intelligence 2015).
- (and J.R. DeShazo, Kurt A. Schwabe, Jeffrey R. Vincent, Ismariah Ahmade), "Incorporating Local Visitor Valuation Information into the Design of New Recreation Sites in Tropical Forests," *Ecological Economics*, vol. 120, 2015.
- "Nonmarket Valuation and Water Resource Management," in Ariel Dinar and Kurt A. Schwabe, eds., *The Handbook of Water Economics* (Northampton, MA: Edward Elgar, 2015).
- (and J.R. DeShazo, Kurt A. Schwabe, Jeffrey R. Vincent, Ismariah Ahmade, Chong Siew Kook and Chang Yii Tan), "Designing and Implementing Surveys to Value Tropical Forests: A Malaysian Application," *Journal of Tropical Forest Science*, vol. 27, 2015.
- (and Jordan J. Louviere, John M. Rose, and Joffre Swait), "Frontiers in Modelling Discrete Choice Experiments: A Benefit-Transfer Perspective," in Robert Johnston, John Rolfe, Randy Rosenberger, and Roy Brouwer, eds., *Benefit Transfer of Environmental and Resource Values: A Handbook for Researchers and Practitioners* (Dordrecht, Netherlands: Springer, 2015).
- (and Kurt A. Schwabe, J.R. DeShazo, Matthew D. Potts, Ashley N. Reese, and Jeffrey R. Vincent), "Creation of Malaysia's Royal Belum State Park: A Case Study of Conservation in a Developing Country," *Journal of Environment and Development*, vol. 24, 2015.
- (and Jordan J. Louviere) "Statistical Properties of Consideration Sets," *Journal of Choice*

- Modelling*, vol. 13, 2014.
- (and Jeffrey R. Vincent, J.R. DeShazo, Kurt A. Schwabe, Ismariah Ahmade, Chong Siew Kook, Chang Y. Tan and Matthew D. Potts), "Tropical Countries May Be Willing to Pay More to Protect Their Forests," *Proceedings of National Academy of Sciences*, vol. 111, 2014.
- (and Theodore Groves and John A. List), "Consequentiality: A Theoretical and Experimental Exploration of a Single Binary Choice," *Journal of the Association of Environmental and Resource Economists*, vol. 1, 2014.
- (and Mikolaj Czajkowski), "The Discrete Choice Experiment Approach to Environmental Contingent Valuation," in Stephane Hess and Andrew Daly, eds. *Handbook of Choice Modelling* (Northampton, MA: Edward Elgar, 2014).
- "Exxon Valdez," in T.C. Haab and J. Whitehead, eds., *Encyclopedia of Environmental and Natural Resource Economics* (Westport, CT: Greenwood Press, 2014).
- (and Nada Wasi), "The Influence of Rebate Programs on the Demand for Water Heaters: The Case of New South Wales," *Energy Economics*, vol. 40, 2013.
- (and Kevin Novan), "The Private and Social Economics of Bulk Electricity Storage," *Journal of Environmental Economics and Management*, vol. 66, 2013.
- (and Jordan J. Louviere, Leonie Burgess, A.A.J. Marley, Deborah Street), "Sequential Preference Questions: Factors Influencing Completion Rates and Response Times Using an Online Panel," *Journal of Choice Modelling*, vol. 8, 2013.
- (and Michael B. Conaway and Ståle Navrud), "Preliminary Valuation of a Cultural Heritage Site of Global Significance: A Delphi Contingent Valuation Study," in Ilde Rizzo and Anna Mignosa, eds., *Handbook on the Economics of Cultural Heritage* (Northampton, MA: Edward Elgar, 2013).
- (and Samuel R. Dastrup), "After the Fall: An Ex Post Characterization of Housing Price Declines Across Metropolitan Areas," *Contemporary Economic Policy*, vol. 31, 2013.
- "Contingent Valuation: A Practical Alternative When Prices Aren't Available," *Journal of Economic Perspectives*, vol. 26, 2012. Reprinted in R.N. Stavins, *Economics of the Environment: Selected Readings, 7th ed.* (Cheltenham, UK: Edward Elgar: forthcoming).
- (and Paul Metcalfe, William Baker, Kevin Andrews, Giles Atkinson, Ian Bateman, Sara Butler, Jo East, Yves Gueron, Rob Sheldon and Kenneth Train), "An Assessment of the Non-Market Benefits of the Water Framework Directive for Households in England and Wales," *Water Resources Research*, vol. 48, 2012.
- (and Brett Day, Ian J. Bateman, Diane Dupont, Jordan J. Louviere, Sanae Morimoto, Riccardo Scarpa, and Paul Wang), "Ordering Effects and Choice Set Awareness in Repeat-Response Stated Preference Studies," *Journal of Environmental Economics and Management*, vol. 63, 2012.
- (and Jordan J. Louviere), "A Common Nomenclature for Stated Preference Approaches," *Environmental and Resource Economics*, vol. 49, 2011.
- (and Tolga Cenesizoglu and Roger Parker), "Aggregation Issues in Forecasting Aggregate Demand: An Application to U.S. Commercial Air Travel," *International Journal of Forecasting*, vol. 27, 2011.
- (and Theodore Groves), "Incentive and Information Properties of Preference Questions: Commentary and Extensions," in Jeff Bennett, ed., *International Handbook of*

- Non-Market Environmental Valuation* (Northampton, MA: Edward Elgar, 2011).
Contingent Valuation: A Comprehensive Bibliography and History (Northampton, MA: Edward Elgar, 2011).
- (and David Philens and Jordan Louviere), "Design of Discrete Choice Experiments: A Discussion of Issues That Matter in Future Applied Research," *Journal of Choice Modelling*, vol. 4, 2011.
- (and Phoebe Koundouri, and Céline Nauges), "Arsenic Mitigation in Bangladesh: A Household Labor Market Approach," *American Journal of Agricultural Economics*, vol. 93, 2011. Reprinted in Kenneth G. Willis and Guy Garrod, *Valuing Environmental and Natural Resources* (Northampton, MA: Edward Elgar, 2014).
- (and Jordan J. Louviere and Terry N. Flynn, "Discrete Choice Experiments Are Not Conjoint Analysis," *Journal of Choice Modelling*, vol. 3, 2010.
- (and Christine Ebling, Bart Frischknecht, Jordan J. Louviere, and John Rose), "Some Observations on the Great Sawtooth Model-Off Competition And a Few Remarks on Ralph Wirth's Simulation Results," *Proceedings of the 15th Annual Sawtooth Software Conference* (Sequim, WA: Sawtooth Software, 2010).
- (and Jordan J. Louviere), "Experimental Design and the Estimation of Willingness to Pay in Choice Experiments for Health Policy Evaluation," in Philip Clarke, Emma Frew, Jordan Louviere and Emma McIntosh, eds., *Applied Methods of Cost-Benefit Analysis in Health Care* (Oxford: Oxford University Press, 2010).
- (and Jordan J. Louviere and Edward Wei, "Alternative Australia's Climate Change Plan: The Public's Views," *Energy Policy*, vol. 38, 2010.
- "Environmental Kuznets Curve: Searching for Empirical Regularity and Theoretical Structure," *Review of Environmental Economics and Policy*, vol. 4, 2010. Reprinted in Peter Victor, *The Costs of Economic Growth* (Northampton: MA: Edward Elgar, 2013).
- (and Brigitte Roth Tran), "Discounting Behavior and Environmental Decisions," *Journal of Neuroscience, Psychology and Economics*, vol. 2, 2009.
- (and Maria Damon, Leigh T. Johnson, and Jamie A. Miller), "Conceptual Issues in Designing a Policy to Phase Out Metal-Based Antifouling Paints on Recreational Boats in San Diego Bay," *Journal of Environmental Management*, vol. 90, 2009.
- (and Jordan Louviere and Nada Wasi), "A Cautionary Note on Designing Discrete Choice Experiments: A Comment on Lusk and Norwood's 'Effect of Experiment Design on Choice-Based Contingent Valuation Estimates'," *American Journal of Agricultural Economics*, vol. 91, 2009.
- (and W. Michael Hanemann and Thomas C. Wegge), "A Nested Logit Model of Recreational Fishing Demand in Alaska," *Marine Resource Economics*, vol. 24, 2009.
- (and Maximillian Auffhammer), "Exploring the Number of First Order Political Subdivisions Across Countries: Some Stylized Facts," *Journal of Regional Science*, vol. 49, 2009.
- (and Clive Granger, Jeremy Jackson and Wolfram Schlenker), "Fisheries Management Under Cyclical Population Dynamics," *Environmental and Resource Economics*, vol. 42, 2009.
- (and Maximillian Auffhammer), "Forecasting the Path of China's CO2 Emissions: Using Province Level Information," *Journal of Environmental Economics and*

- Management*, vol. 55, 2008.
- (and Y. Sun), "The Tobit Model with a Non-Zero Threshold," *Econometrics Journal*, vol. 10, 2007.
- The Stated Preference Approach to Environmental Valuation [Volume 1]: Foundations, Initial Development, Statistical Approaches* (Aldershot, UK: Ashgate, 2007).
- The Stated Preference Approach to Environmental Valuation [Volume 2]: Conceptual and Empirical Issues* (Aldershot, UK: Ashgate, 2007).
- The Stated Preference Approach to Environmental Valuation [Volume 3]: Benefit-Cost Analysis and Natural Resource Damage Assessment* (Aldershot, UK: Ashgate, 2007).
- (and T. Groves), "Incentive and Information Properties of Preference Questions," *Environmental and Resource Economics*, vol. 37, 2007. Reprinted in Barry Field and Gardner Brown, *The Economics of Natural Resources* (New York: Rutledge, 2014).
- (and Sheila Walsh), "Preventing Damage from Oil Spills: Lessons for the Exxon Valdez," *Oceanis*, vol. 32, 2006.
- (and Robert Cameron Mitchell), "Public Preferences Toward Risk: The Case of Trihalomethanes," in A. Alberini, D. Bjornstad, and J.R. Kahn, eds., *Handbook of Contingent Valuation* (Northampton, MA: Edward Elgar, 2006).
- (and W. Michael Hanemann), "Contingent Valuation," in *Handbook of Environmental Economics*, Karl-Göran Mäler and Jeffrey R. Vincent, eds. (Amsterdam: North-Holland, 2005).
- (and Jordan Louviere, Kenneth Train, Moshe Ben-Akiva, Chandra Bhat, David Brownstone, Trudy Ann Cameron, J.R. DeShazo, Denzil Fiebig, William Greene, David Hensher, and Donald Waldman, "Recent Progress on Endogeneity in Choice Modeling," *Marketing Letters*, vol. 16, 2005.
- (and Michael B. Conaway, W. Michael Hanemann, Jon A. Krosnick, Robert Cameron Mitchell, and Stanley Presser), *Valuing Oil Spill Prevention: A Case Study of California's Central Coast* (Boston: Kluwer Academic Press, 2004).
- (and Robert Cameron Mitchell, W. Michael Hanemann, Raymond J. Kopp, Stanley Presser, and Paul A. Ruud), "A Valoracion Continente e a Perda dos Usos Pasivos: Danos da Marea Negra do Exxon Valdez," in Albino Prada and Maria Xose Vazquez, eds., *Efectos Economicos, Socias, E Ambientais da Marea Negra Do "Prestige"* (Santiago de Compostela, Spain Consello da Cultura Galega, 2004).
- "Review of 'The Economic Valuation of the Environment and Public Policy: A Hedonic Approach' by Noboru Hidano," *Environment*, vol. 46, 2004.
- (and Gui Li, Paul Wang, and Jordan Louviere), "Archetypal Analysis: A New Way to Segment Markets Based on Extreme Individuals," in *A Celebration of Ehrenberg and Bass: Marketing Knowledge, Discoveries and Contribution* (Adelaide, Australia: ANZMAC, 2003).
- (and Robert Cameron Mitchell, W. Michael Hanemann, Raymond J. Kopp, Stanley Presser, and Paul A. Ruud), "Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez Oil Spill," *Environmental and Resource Economics*, vol. 25, 2003. Reprinted in R.N. Stavins, *Economics of the Environment: Selected Readings* (New York: Norton, 2005) and in A. Schmitz and R.O. Zerbe, *Applied Benefit-Cost [Library of Critical Writings in Economics]*

- (Northampton, MA: Edward Elgar, 2008).
- (and Jon A. Krosnick, Allyson Holbrook, Matthew K. Berent, W. Michael Hanemann, Raymond J. Kopp, Robert Cameron Mitchell, Paul A. Ruud, V. Kerry Smith, Wendy R. Moody, Melanie C. Green, and Michael Conaway), "The Impact of "No Opinion" Response Options on Data Quality: Non-Attitude Reduction or an Invitation to Satisfice?" *Public Opinion Quarterly*, vol. 66, 2002. Reprinted in Caroline Roberts and Roger Jowell, *Attitude Measurement* (London: Sage, 2008).
- (and Jordan Louviere, Deborah Street, Andrew Ainslie, Trudy Cameron, J.R. DeShazo, David Hensher, Robert Kohn, and Tony Marley), "Dissecting the Random Component," *Marketing Letters*, vol. 13, 2002.
- "The Practice of Environmental and Resource Economics," (guest editor), Special Issue of *Environmental and Resource Economics*, vol. 22, 2002.
- (and Ian Bateman, Brett Day, W. Michael Hanemann, Nick Hanley, Tannis Hett, Michael Jones-Lee, Graham Loomes, Susana Mourato, Ece Özdemiroglu, David Pearce, Robert Sugden, and John Swanson, *Economic Valuation with Stated Preference Techniques: A Manual* (Northampton, MA: Edward Elgar, 2002).
- (and Robert Cameron Mitchell and Michael B. Conaway), "Economic Benefits to Foreigners Visiting Morocco Accruing from the Rehabilitation of the Fes Medina," in Ståle Navrud and Richard C. Ready, eds., *Valuing Cultural Heritage: Applying Environmental Valuation Techniques to Historic Buildings, Monuments and Artifacts* (Northampton, MA: Edward Elgar, 2002).
- (and Linda Fernandez, eds.) *Both Sides of the Border: Transboundary Environmental Management Issues Facing Mexico and the United States* (Boston: Kluwer Academic Press, 2002).
- (and Nicholas E. Flores, and Norman F. Meade), "Contingent Valuation: Controversies and Evidence," *Environmental and Resource Economics*, vol. 19, 2001. Reprinted in Michael Hoel, ed., *Recent Developments in Environmental Economics: The International Library of Critical Writings in Economics*, (Northampton, MA: Edward Elgar, 2004), in C.F. Mason and E.H. Bulte, eds., *Environmental Economics: Critical Concepts in the Environment* (New York: Routledge, 2008), and in K.G. Willis and G. Garrod, eds., *Valuing Environmental and Natural Resources* (Northampton, MA: Edward Elgar, 2014).
- "Contingent Valuation," in Neil J. Smelser and Paul B. Baltes, eds. *International Encyclopedia of the Social and Behavioral Sciences* (Oxford: Pergamon, 2001).
- (and Robert Cameron Mitchell), "Protest, Property Rights, and Hazardous Waste: A Reassessment," in Heyes, Anthony, ed., *Law and Economics of the Environment* (Northampton, MA: Edward Elgar, 2001).
- (and Allyson L. Holbrook, Jon A. Krosnick and Robert Cameron Mitchell), "Violating Conversational Conventions Disrupts Cognitive Processing of Attitude Questions," *Journal of Experimental Social Psychology*, vol. 36, 2000.
- (and Theodore G. Ganiats, Robert Hamm, Scott Cantor, Walton Sumner, Stephen Spann, Michael Hagen, and Christopher Miller), "Population-Based Time Preferences for Future Health Outcomes," *Medical Decision Making*, vol. 20, 2000.
- "Contingent Valuation: A User's Guide," *Environmental Science and Technology*, vol. 34, 2000. Reprinted in Linda Kalof and Terre Satterfield, eds., *Essential Readings in*

- Environmental Values*, (London: Earthscan, 2005).
- (and Jordan J. Louviere, Robert J. Meyer, David Bunch, Benedict Delleart, W. Michael Hanemann, David Hensher, and Julie Irwin), "Combining Sources of Preference Data for Modeling Complex Decision Processes," *Marketing Letters*, vol. 10, 1999.
- (and Nicholas E. Flores and Robert Cameron Mitchell), "The Theory and Measurement of Passive Use Value," in I.J. Bateman and K.G. Willis, eds., *Valuing Environmental Preferences: Theory and Practice of the Contingent Valuation Method in the US, EU, and Developing Countries* (Oxford: Oxford University Press, 1999).
- (and Robert Cameron Mitchell), "Protests, Property Rights, and Hazardous Waste," in Wallace E. Oates, ed., *The RFF Reader in Environmental and Resource Management* (Washington, DC: Resource for the Future, 1999).
- (and Nicholas E. Flores and W. Michael Hanemann), "Sequencing and Valuing Public Goods," *Journal of Environmental Economics and Management*, vol. 36, 1998. Reprinted in Richard O. Zerbe, ed. *Benefit-Cost Analysis [The International Library of Critical Writings in Economics]* (Northampton, MA: Edward Elgar).
- (and Dan Steinberg and Leo Breiman), "Broad Scale Missing Value Imputation with Iterative Binary Partitioning," in David W. Scott, ed., in *1997 Symposium on the Interface: Computing Science and Statistics* (Fairfax Station, VA: Interface Foundation of North America, 1998).
- (and W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith), "Referendum Design and Contingent Valuation: The NOAA Panel's No-Vote Recommendation," *Review of Economics and Statistics*, vol. 80, 1998.
- "Valuation of Tropical Rainforest: Philosophical and Practical Issues in the Use of Contingent Valuation," *Ecological Economics*, vol. 24, 1998.
- (and Yongil Jeon and Donald R. McCubbin), "The Relationship Between Air Pollution Emissions and Income: U.S. Data," *Environment and Development Economics*, vol. 2, 1997.
- "Contingent Valuation: Theoretical Advances Since the NOAA Panel," *American Journal of Agricultural Economics*, vol. 79, 1997.
- (and Anna Alberini and Barbara J. Kanninen), "Modeling Response Incentive Effects in Dichotomous Choice Contingent Valuation Data," *Land Economics*, vol. 73, 1997.
- (and Nicholas E. Flores), "The Relationship Between Income Elasticities of Demand and Willingness to Pay," *Journal of Environmental Economics and Management*, vol. 33, 1997.
- (and W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith), "Temporal Reliability of Estimates from Contingent Valuation," *Land Economics*, vol. 73, 1997.
- "Contingent Valuation and Tests of Insensitivity to Scope," in R.J. Kopp, W. Pommerhene, and N. Schwartz, eds., *Determining the Value of Non-Marketed Goods: Economic, Psychological, and Policy Relevant Aspects of Contingent Valuation Methods*, (Boston: Kluwer, 1997).
- (and Nicole Bordes and Bernard A. Pailthorpe (1997), "An Archetypal Representation of the History of the US Economy", *Gather/Scatter* (SDSC) vol. 13.
- (and Nicholas E. Flores, Kerry M. Martin and Jennifer L. Wright), "Contingent Valuation and Revealed Preference Methodologies: Comparing the Estimates for Quasi-Public

- Goods," *Land Economics*, vol. 72, 1996.
- (and Robert Cameron Mitchell), "Current Issues in the Design, Administration, and Analysis of Contingent Valuation Surveys," in P.O. Johansson, B. Kriström, and K.G. Mäler, eds., *Current Issues in Environmental Economics* (Manchester: Manchester University Press, 1995).
- (and Robert Cameron Mitchell), "Sequencing and Nesting in Contingent Valuation Surveys," *Journal of Environmental Economics and Management*, vol. 28, 1995.
- (and Leanne Wilks and David Imber), "Valuing the Preservation of Australia's Kakadu Conservation Zone," *Oxford Economic Papers*, vol. 46, 1994.
- (and Jordan Louviere, Donald Anderson, Phipps Arabie, David Bunch, David Hensher, Richard M. Johnson, Warren F. Kuhfeld, Dan Steinberg, Joffre Swait, Harry Timmermans, and James B. Wiley), "Experimental Analysis of Choice," *Marketing Letters*, vol. 5, 1994.
- (and Robert Cameron Mitchell), "The Issue of Scope in Contingent Valuation Surveys," *American Journal of Agricultural Economics*, vol. 75, 1993.
- (and John K. Horowitz), "Baseline Risk and Preference for Reductions in Risk-to-Life," *Risk Analysis*, vol. 13, 1993.
- (and Norman F. Meade and V. Kerry Smith), "Passive Use Values and Contingent Valuation: Introducing the Issues," *Choices*, vol. 8, 1993.
- (and Robert Cameron Mitchell), "The Value of Clean Water: The Public's Willingness to Pay for Boatable, Fishable, and Swimmable Quality Water," *Water Resources Research*, vol. 29, 1993. Reprinted in Arnold C. Harberger and Glenn P. Jenkins, eds., *Cost-Benefit Analysis: The International Library of Critical Writings in Economics* (Northampton, MA: Edward Elgar, 2002) and in R. Quentin Grafton, ed. *Economics of Water Resources: The International Library of Critical Writings in Economics* (Northampton, MA: Edward Elgar, 2009).
- (and Robert Cameron Mitchell), "Contingent Valuation and the Legal Arena," in Raymond Kopp and V. Kerry Smith, eds., *Valuing Natural Assets: The Economics of Natural Resource Damage Assessment*. (Washington: Resources for the Future, 1993).
- (and Robert F. Engle and Peter Navarro), "On the Theory of Growth Controls," *Journal of Urban Economics*, vol. 32, 1992.
- "Kakadu Conservation Zone," in Kevin Ward and John Duffield, eds., *Natural Resource Damages: Law and Economics*. (New York: John Wiley, 1992).
- (and John K. Horowitz), "A Classification Tree for Predicting Consumer Preferences for Risk Reduction," *American Journal of Agricultural Economics*, vol. 73, 1991.
- (and William Balson and Robert Mitchell) "The Grand Canyon Visibility Benefits Study," in *Proceedings of the 84th Annual Air and Waste Management Association Meeting*, Pittsburgh: AWMA, 1991.
- (and Jeffrey T. Grogger), "Models for Truncated Counts," *Journal of Applied Econometrics*, vol. 6, 1991.
- (and Peter Navarro), "Growth Controls: Policy Analysis for the Second Generation," *Policy Sciences*, vol. 24, 1991.
- (and Kerry M. Martin), "Measuring the Benefits of Fresh Water Quality Changes: Techniques and Empirical Findings," in Ariel Dinar and David Zilberman, *The Economics and Management of Water and Drainage in Agriculture* (Boston: Kluwer, 1991).

- "Constructed Markets," in John Braden and Charles Kolstad, eds., *Measuring the Demand for Environmental Commodities* (Amsterdam: North-Holland, 1991).
- (and K.A. Kiel), "An Examination of Systematic Differences in the Appreciation of Individual Housing Units," *Journal of Real Estate Research*, vol. 5, 1990.
- (and John Horowitz) "Discounting Statistical Lives," *Journal of Risk and Uncertainty*, vol. 3, 1990. Reprinted in W. Kip Viscusi, John F. Cogan, and Ted Gayer, eds., *Classics in Risk Management* (Northampton, MA: Edward Elgar, 2004).
- (and W. Michael Hanemann and Dan Steinberg) "A Discrete Choice Contingent Valuation Estimate of the Value of Kenai King Salmon," *Journal of Behavioral Economics*, vol. 19, 1990.
- (and Robert Cameron Mitchell and Paul Ruud), "Valuing Air Quality Improvements: Simulating a Hedonic Pricing Equation in the Context of a Contingent Valuation Scenario," in C.V. Mathai, ed., *Visibility and Fine Particulates* (Pittsburgh: Air and Waste Management Association, 1990).
- (and Dan Steinberg), "Experimental Design for Discrete Choice Voter Preference Surveys," in *1989 Proceeding of the Survey Methodology Section of the American Statistical Association*, (Washington: American Statistical Association, 1990).
- (and Robert Cameron Mitchell), *Using Surveys to Value Public Goods: The Contingent Valuation Method* (Washington, DC: Resources for the Future, 1989). Japanese translation (Tokyo: Sankaido Company, 2001).
- (and Shankar Subramanian), "Robust Regression in the Presence of Heteroscedasticity," *Advances in Econometrics*, vol. 7, 1988.
- (and Peter Navarro), "Fundamental Issues in Natural Resource Damage Assessment," *Natural Resources Journal*, vol. 28, Fall 1988.
- (and Wegge, Thomas C., and W. Michael Hanemann), "Site Quality and Demand for Sport Fishing in Southcentral Alaska," in David S. Liao, ed., *Proceedings of the Symposium of Demand and Supply of Sport Fishing* (Charleston, SC: International Institute of Fisheries Economics and Trade, 1988).
- (and Robert Cameron Mitchell), "How Far Out on the Learning Curve Are We with Contingent Valuation?" in *Proceedings of the Conference on the Role of Social/Behavior Science in Water Resource Management* (New York: American Society of Civil Engineers/Engineering Foundation/Universities' Council on Water Resources, 1988).
- (and Robert Mitchell), "Evaluating the Validity of Contingent Valuation Studies," in George Peterson, B.L. Driver, and Robin Gregory, eds. *Amenity Resource Valuation: Integrating Economics with Other Disciplines* (State College, PA: Venture Publishing, 1988).
- (and Peter Navarro), "A Seller's (& Buyer's) Guide to the Job Market for Beginning Academic Economists," *Journal of Economic Perspectives*, vol. 2, Spring 1988.
- (and Janet Lord, Margaret Portwood, William Fowler, and James Lieberman), "Functional Ability and Equipment Use Among Patients with Neuromuscular Disease," *Archives of Physical Medicine and Rehabilitation*, vol. 68, June 1987.
- (and Janet Lord, Margaret Portwood, William Fowler, and James Lieberman), "Upper vs. Lower Extremity Functional Loss in Neuromuscular Disease," *Archives of Physical Medicine and Rehabilitation*, vol. 68, January 1987.
- (and Robert Cameron Mitchell), "Protests, Property Rights, and the Siting of Hazardous

- Waste Facilities," *Resources*, Fall 1986.
- (and Robert Cameron Mitchell), "Property Rights, Protest, and the Siting of Hazardous Waste Facilities," *American Economic Review*, vol. 76, May 1986.
- (and Robert Cameron Mitchell), "Some Comments on the State of the Art Assessment," in R.G. Cummings, D.S. Brookshire, W.D. Schulze, eds., *Valuing Environmental Goods: A State of the Arts Assessment of the Contingent Valuation Method* (Totowa, NJ: Rowman and Allanheld, 1986).
- (and Shankar Subramanian), "A Robust Data Smooth Based on an L-Estimator," 1985 *Proceeding of the Statistical Computing Section of the American Statistical Association*, (Washington: American Statistical Association, 1986).
- (and Ray J. Kopp and William J. Vaughan and Michael Hazilla), "Implications of Environmental Policy for U.S. Agriculture: The Case of Ambient Ozone," *Journal of Environmental Management*, Vol. 20, 1985.
- (and Joe A. Oppenheimer), "A Reply to Our Critics," *American Political Science Review*, vol. 79, no. 3, September 1985.
- "SAS Macros for Bootstrapping and Cross-Validating Regression Equations," in *Proceedings of the 10th Annual Conference of the SAS Users Group International*, (Cary, NC: SAS Institute, 1985).
- (and Robert Cameron Mitchell), "Comment on 'Option Value: Empirical Evidence from a Case Study'," *Quarterly Journal of Economics*, vol. 100, February 1985.
- "Compensating for Missing Data and Invalid Responses in Contingent Valuation Surveys," in 1984 *Proceedings of the Survey Research Section of the American Statistical Association* (Washington: American Statistical Association, 1985).
- (and Irving Hoch), *Energy Oriented Input-Output Models for 1972 and 2000* (Palo Alto, CA: Electric Power Research Institute, 1984).
- (and Joe A. Oppenheimer), "A Method of Estimating the Personal Ideology of Political Representatives," *American Political Science Review*, vol. 78, no. 1, March 1984.

CONTRIBUTOR CREDITS

- Lareau, Thomas J. and Joel Darmstadter, *Energy and Household Expenditure Patterns* (Palo Alto, CA: Electric Power Research Institute, March 1984).
- Vaughan, William J. and Clifford S. Russell, *Freshwater Recreational Fishing: The National Benefits of Water Pollution Control* (Baltimore, MD: Resources for the Future/Johns Hopkins University Press, 1982).
- Sherefkin, Mark, "Aggregate Environmental Epidemiology: Retrospect and Prospect," Report to the U.S. Environmental Protection Agency, March 1981.

REPORTS AND OTHER PAPERS

- (and Robert W. Paterson, Kevin J. Boyle, Barbara Kanninen, and Christopher Leggett), "Visibility Valuation Study: Final Survey Results," draft report to the Air Resources Division, U.S. National Park Service, March 2018.
- (and Jennifer Le and Lisa Levin), "Ecosystem Service-Based Strategies for Optimizing Natural Treatment of Stormwater in Southern California," report to the University of Southern California Sea Grant Program, March 2018.

- (and Tamara L. Sheldon, J.R. DeShazo, and Samuel Krumholz), "Factors Affecting Plug-in Electric Vehicle Sales in California," Report to the California Air Resources Board, Luskin Center, UCLA, May 2017.
- (and Bishop, Richard C. Kevin J. Boyle, David Chapman, W. Michael Hanemann, W.M., Barbara Kanninen, Raymond J. Kopp, Jon A. Krosnick, John List, Norman Meade, Robert Paterson, Stanley Presser, V. Kerry Smith, Roger Tourangeau, Michael Welsh, Jeffrey M. Wooldridge, Matthew DeBell, Colleen Donovan, Matthew Konopka, and Nora Scherer), "Total Economic Value for Avoiding Injuries Due to Release of Oil from Macondo Well into the Gulf of Mexico in 2010: Technical Reports, U.S. National Oceanic and Atmospheric Administration, April 2017.
- (and Jon Strand, Ståle Navrud, Ariel, Ortiz-Bobea, and Jeffrey R. Vincent, "The Delphi Method as a Tool in Amazon Rainforest Valuation," *Association of Environmental and Resource Economists Newsletter*, vol. 34, no. 1, May 2014.
- (and Robert W. Paterson, Kevin J. Boyle, Barbara Kanninen, Christopher Leggett, and John Molenaar), "National Park Service Visibility Valuation Study: Pilot Survey Results," report to the Air Resources Division, U.S. National Park Service, April 2013.
- (and Giles Atkinson, Gail Bradford, Jordan Louviere, Susana Mourato, David Philens, Frances Terlich and Edward Wei. "Public Preferences Feasibility Study Second Phase," final report to the Ministry of Justice, United Kingdom, September 2010.
- (and Giles Atkinson, Gail Bradford, Jordan Louviere, Susana Mourato, David Philens, Frances Terlich and Edward Wei. "Public Preferences Feasibility Study," final report to the Ministry of Justice, United Kingdom, January 2010.
- (and Trudy Cameron, Richard Carson and Anthony Fisher), "Welcome [Introductory Remarks for the First Issue]," *Review of Environmental Economics and Policy*, vol. 1, 2007.
- (and Lee, Cynthia, Allan Snively, Robert H. Leary, Laura Carrington, Henri Casanova, Roger Bohn, Jennifer Hardy and Yael Schwartzman), "Towards High-Order Performance Objectives for HPC System Scheduling." San Diego Supercomputer Center Technical Report, March 2004.
- (and Christopher Leggett, Robert W. Paterson, Robert E. Unsworth, James E. Neumann, Kevin Boyle, Robert Cameron Mitchell), "Valuing Visibility in National Parks: An Overview of the Issues," report to the Air Resources Division, U.S. National Park Service, March 2004.
- (and Maria Damon, Leigh Johnson, and Jamie Miller), "Transitioning to Non-Metal Antifouling Paints on Marine Recreational Boats in San Diego Bay," report to the California Department of Boating and Waterways, October 2002.
- (and Rohit Verma, Jordan Louviere, Paul Burke, and Cathy Louviere) "Campground Choice Behavior in Shawnee National Forest, Illinois," report to the Urban Forestry Project, North Central Forest Experiment Station, U.S. Forest Service, Chicago, April 2001.
- (and Rachel Cichowski), "Genetically Modified Foods: Economy, Controversy, Legality," draft manuscript, University of California, Institute on Global Conflict and Cooperation, September 2000.
- (and David Zilberman), "Resolving Israeli-Palestinian Water Issues," University of California Institute on Global Conflict and Cooperation, Policy Brief 11-1, October 1999.

- (and Nadja Marinova), "Running on Air," University of California Institute on Global Conflict and Cooperation, Policy Brief 13, September 1999.
- (and David H. Moreau, Fred P. Bosselman, Jeanne N. Clarke, Leo M. Eisel, Wilford R. Gardner, Richard F. Gorini, Constance E. Hunt, Ray B. Krone, Ann L. Riley, Richard E. Sparks, Bory Steinberg, and Douglas C. Woolley), *New Directions in Water Resources Planning for the U.S. Army Corps of Engineers* (Washington, DC: National Academy Press, 1999).
- (and Robert C. Mitchell, Michael B. Conaway, and Ståle Navrud, "Non-Moroccan Values for the Rehabilitation of the Fes Medina," report to the World Bank, August 1997.
- (and Nicholas E. Flores), "Another Look at 'Does Contingent Valuation Measure Preferences?: Experimental Evidence': How Evident is the Evidence?," Discussion paper 96-31, Department of Economics, University of California, September 1996.
- (and W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith), "Was the NOAA Panel Correct About Contingent Valuation," Discussion paper 96-20, Resources for the Future, June 1996.
- (and Michael B. Conaway, W. Michael Hanemann, Jon A. Krosnick, Kerry Martin, Donald R. McCubbin, Robert Mitchell, and Stanley Presser), "The Value of Preventing Oil Spill Injuries to Natural Resources Along California's Central Coast," report to California Attorney General's Office, March 1996.
- (and Robert Cameron Mitchell, W. Michael Hanemann, Raymond J. Kopp, Stanley Presser, and Paul A. Ruud), "Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez," University of California, San Diego, Discussion Paper 95-02, January 1995.
- (and Jennifer Wright, Nancy Carson, Anna Alberini, and Nicholas Flores), "A Bibliography of Contingent Valuation Studies and Papers," Natural Resource Damage Assessment, Inc., La Jolla, CA, January 1995.
- (and W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith), "Prospective Interim Lost Use Value Due to DDT and PCB Contamination in the Southern California Bight," report to National Oceanic and Atmospheric Administration, September 1994.
- (and Robert A. Frosch, Paul D. Boehm, Patricia A. Bolton, Philip M. Diamond, Stuart A. Horn, Joseph A. Nichols, Edward H. Owens, Robert T. Paine, Malcolm L. Spaulding, John M. Teal), *Review of the Interagency Oil Pollution Research and Technology Plan: Final Report of the Committee on Oil Spill Research and Development*, (Washington: National Academy of Sciences, September 1994)
- (and Jon Krosnick and Robert Cameron Mitchell), "Response Order Effects in Questions with Simple Dichotomous Alternatives," unpublished paper, Department of Psychology, Ohio State University, August 1994.
- (and Anna Alberini), "The Efficiency of Binary Discrete Choice Estimation". Department of Economics, Department of Economics, University of California, San Diego, Discussion Paper 90-34R, October 1993.
- (and Robert A. Frosch, Paul D. Boehm, Patricia A. Bolton, Philip M. Diamond, Stuart A. Horn, Joseph A. Nichols, Edward H. Owens, Robert T. Paine, Malcolm L. Spaulding, John M. Teal), *Review of the Interagency Oil Pollution Research and Technology Plan: First Report of the Committee on Oil Spill Research and Development*,

- (Washington: National Academy Press, 1993)
- (and Robert C. Mitchell, W. Michael Hanemann, Raymond J. Kopp, Stanley Presser, and Paul A. Ruud), "A Contingent Valuation Study of Lost Passive Use Values Resulting from the Exxon Valdez Oil Spill," report to the Attorney General of the State of Alaska, November 1992.
- (and Michael Costanzo, Michael Hanemann, Steve Waters, and Thomas Wegge), "Southeast Alaska Sport Fishing Economic Study," report to Alaska Department of Fish and Game. Sacramento, CA: Jones & Stokes Associates, December 1991.
- (and W. Michael Hanemann, and Raymond J. Kopp), Comments submitted to the Department of Interior, Office of Environmental Affairs in Response to the Advance Notice of Proposed Rulemaking Concerning Natural Resource Damage Assessments (56 FR 19752, April 29, 1991). Department of Economics, University of California, San Diego, June 1991.
- "Comments on the ABARE Submission," report to the Australian Resource Assessment Commission, April 1991.
- (and Michael B. Conaway, W. Michael Hanemann, Raymond J. Kopp, Robert Cameron Mitchell, Stanley Presser, Paul A. Ruud), "Comments on the Benefit Analysis in the U.S. Environmental Protection Agency's Proposed Navajo Generating Station BART Action, April 1991.
- "The RAC Kakadu Conservation Zone Contingent Valuation Study: Remarks on the Brunton, Stone, and Tasman Institute Critiques," report to the Australian Resource Assessment Commission, March 1991.
- (and W. Michael Hanemann, Anna Alberini, Barbara Kanninen, Kerry Martin and Robert C. Mitchell), "Valuation of Non-Market Aspects of Water Systems" report to University of California Water Resources Center, February 1991.
- (and John K. Horowitz), "A Multivariate Characterization of Risk," report to the U.S. Environmental Protection Agency, December 1990.
- (and William E. Balson, Michael B. Conaway, Baruch Fischhoff, W. Michael Hanemann, Annette Hulse, Raymond J. Kopp, Kerry M. Martin, Robert C. Mitchell, John Molenaar, Stanley Presser, and Paul A. Ruud), "Development and Design of a Contingent Valuation Survey for Measuring the Public's Value for Visibility Improvements at the Grand Canyon National Park," report to the Salt River Project, September 1990.
- (and John Horowitz), "Discussing Environmental Health Risks," University of Maryland, Information Paper Series #209001, 1990.
- (and William E. Balson, Kerry M. Martin, Robert C. Mitchell, John Molenaar, Stanley Presser and Paul A. Ruud), "A Review and Critique of the Applicability of Visibility Valuation Studies to a Navajo Power Plant BART Decision," report to the Salt River Project, January 1990.
- (and Robert Cameron Mitchell and Paul Ruud) "Cincinnati Visibility Valuation Study: Pilot Study Findings" report Electric Power Research Institute, December 1989.
- (and John K. Horowitz and Melissa Mellisinos) "The Relationship Between Desire to Reduce Risks and Factors Scores for Environmental Risks," Working Paper 89-31, Department of Agricultural and Resource Economics, University of Maryland, 1989.
- (and Robert Mitchell), "Valuing Air Quality Improvements," *Association of Environmental and Resource Economists Newsletter*, vol. 9, no. 1, June 1989.

(and Wendy Illingworth), "The Use of Value of Service Estimates in Electric Reliability Studies," report to Metropolitan Water District of Southern California," August 1989.

(and Robert Cameron Mitchell), "Existence Values for Groundwater Protection," report to the U.S. Environmental Protection Agency, May 1989.

(and Robert Cameron Mitchell), "Cincinnati Visibility Valuation Study: Pilot Study Findings," report to the Electric Power Research Institute, March 1989.

(and Ciaran Phibbs), "Influence of Specific Clinical Services on the Density of Hospital Market Areas", draft manuscript, Department of Economics, University of California, San Diego, February 1989.

(and K.A. Kiel), "Estimating Home Appreciation Rates," discussion paper 88-52, Department of Economics, University of California, San Diego, November 1988.

(and Ben Dziegielewski, Eva Opitz, Duane Baumann and Robert Mitchell), "Drought Media Campaign: Analysis of the Pre-Campaign Survey," report to Metropolitan Water District of Southern California by Planning and Management Consultants, Ltd., October 1988.

(and Robert Cameron Mitchell), "Towards a Methodology for Using Contingent Valuation to Value Air Visibility Benefits," report to the Electric Power Research Institute, Resources for the Future, March 1988.

(and Michael Costanzo, W. Michael Hanemann and Thomas Wegge), "Southcentral Alaska Area Sport Fishing Economic Study," final report to the Alaska Department of Fish and Game by Jones and Stokes Associates, November 1987.

(and James Conway and Christy Joiner), "The Demand for State Level Solar Assistance: An Examination of a 1980 California Referendum," draft manuscript, University of California, San Diego October 1987.

(and W. Michael Hanemann and Robert Cameron Mitchell), "The Use of Simulated Political Markets to Value Public Goods," Discussion Paper 87-7, Department of Economics, University of California, San Diego, March 1987.

(and Michael Costanzo, W. Michael Hanemann, Steve Waters and Thomas Wegge), "Juneau Area Sport Fishing Economic Study," final report to the Alaska Department of Fish and Game by Jones and Stokes Associates, October 1987.

(and John Horowitz and Mark Machina), "Discounting Mortality Risks," Final Technical Report to the U.S. Environmental Protection Agency, UCSD Department of Economics, September 1987.

(and Robert Cameron Mitchell), "Economic Value of a Reliable Water Supply for Residential Water Users in the State Water Project Service Area," report to the Metropolitan Water District of Southern California, June 1987.

(and Murray Fulton and Shankar Subramanian), "Fast Regression Quantiles Using a Modification of the Barrodale and Roberts L1 Algorithm," UCSD Department of Economics Discussion Paper 87-8, March 1987.

"The Implications of Principal Agent Relationships and Moving Parameters for the Design of Optimal Agricultural Legislation," Department of Economics, University of California, San Diego, Discussion Paper 87-9.

(and William W. Wade and Theodore Graham-Tomasi), "Rebuttal to Philip Meyer: 'Value Associated with King Salmon of the Sacramento/San Joaquin/San Francisco Bay System,' Bay Institute Exhibit No. 41, July 1987: Philip Meyer: 'The Value of King

- Salmon, Harbor Seals, and Wetland of San Francisco Bay,' Bay Institute Exhibit No. 41, June 1987," Report to Metropolitan Water District of Southern California. September 1987.
- (and Robert Cameron Mitchell), "The Use of Contingent Valuation Data for Benefit-Cost Analysis in Water Pollution Control," report to the U.S. Environmental Protection Agency, September 1986.
- (and Robert Cameron Mitchell), "Valuing Drinking Water Risk Reductions Using the Contingent Valuation Method: A Methodological Study of Risks from THM and Giardia," report to the U.S. Environmental Protection Agency, May 1986.
- (and Theodore Graham-Tomasi, Charles Rund, and William Wade), "Problems with the Minnesota Pollution Control Agency's Survey Instrument and Survey Results," February 1986.
- "Notes on Option Value and Contingent Valuation," Discussion Paper QE86-3, Resources for the Future, January 1986.
- "Three Essays on Contingent Valuation," Doctoral Dissertation, University of California, Berkeley, August 1985.
- (and Gary Casterline and Robert Cameron Mitchell), "A Note on Testing and Correcting for Starting Point Bias in Contingent Valuation Surveys," Discussion Paper QE85-11, Resources for the Future, January 1985.
- (and Robert Cameron Mitchell), "Willingness to Pay for National Freshwater Quality Improvements," Draft technical report to the US Environmental Protection Agency, October 1984.
- (and Joe A. Oppenheimer and Robert Cameron Mitchell), "The Impact of Environmental Groups on Congressional Voting and Environmental Regulation," draft manuscript, Resources for the Future, October 1984.
- (and Irving Hoch and Charles M. Paulsen), "Nonmetropolitan Energy Use in 1978 by Category of Use and Form of Energy," ERS Staff Report no. AGES840518, Economic Development Division, Economic Research Service, U.S. Department of Agriculture, September 1984.
- (and Irving Hoch), "Variations in Residential Electricity Demand: A Metropolitan-Nonmetropolitan-Regional Analysis," draft manuscript, Resources for the Future, June 1984.
- (and Robert Cameron Mitchell), "Non-Sampling Errors in Contingent Valuation Surveys," Discussion Paper D-120, Resources for the Future, March 1984.
- (and Robert Cameron Mitchell), "A Reestimation of Bishop and Heberlein's Simulated Market-Hypothetical Markets-Travel Cost Results Under Alternative Assumptions," Discussion paper no. D-107, Resources for the Future, 1984.
- "A Model of U.S. Wheat Production Using Microdata and Flexible Functional Forms," draft manuscript, University of California, Berkeley, December 1983.
- "Constructing Voting Indices from Factor Scores," draft manuscript, Resources for the Future, August 1983.
- (and Irving Hoch), "1978 County Level Energy Estimates by Fuel Type and End Use," Resources for the Future, August 1983.
- "The Determinants of Acute Morbidity: Multivariate Techniques for Estimation Using the Health Interview Survey," Discussion paper, Resources for the Future, 1982.
- (and William J. Vaughan and Raymond J. Kopp), "Methodologies for Estimating the

- National Welfare Effects on Agriculture of Alternative Ozone Standards," A report to the U.S. Environmental Protection Agency, April 1982.
- (and Irving Hoch and Charles M. Paulsen), "Nonmetropolitan Energy Use: Consumption and Expenditures in 1978 and Comparisons to Metropolitan Energy Use," A report to the U.S. Department of Agriculture, October 1981. Available through the National Technical Information Service as ERS Staff Report AGES840517.
- (and William J. Vaughan and Clifford S. Russell), "A Survey of Recreation Fee Fishing Enterprises," *Farm Pond Harvest*, vol. 15, no. 4, Fall 1981.
- (and Robert Cameron Mitchell), "An Experiment in Determining Willingness to Pay for National Water Quality Improvements," A report to U.S. Environmental Protection Agency, June 1981.
- (and William J. Vaughan and Clifford S. Russell), *National Directory of Recreational Fee Fisheries* (Washington, D.C.: Resource for the Future, 1980).
- "The Anglo-Icelandic Fisheries Disputes 1948-1976: A Case Study of a Protracted Conflict," Master's Thesis, George Washington University, 1980.

PRESENTATIONS AT PROFESSIONAL MEETINGS

- (Fanglin Sun), "Coastal Wetlands Reduce Property Damage During Tropical Cyclones," paper presented at the 13th Annual Meeting of the Environment for Development Initiative, Bogota, Columbia, November 2019.
- (and Carlo Fezzi, Silvia Ferrini and Amii Harwood), "The Influence of Weather on Outdoor Recreation: Forecasting the Implications of Climate Change," paper presented at the World Congress of Environmental and Resource Economists, Gothenburg, Sweden, June 2018.
- (and Fanglin Sun), "Coastal Wetlands Reduce Property Damage During Tropical Cyclones," paper presented at the World Congress of Environmental and Resource Economists, Gothenburg, Sweden, June 2018.
- (and Mark Jacobsen and Antung Liu), "Are Carbon Taxes More Efficient in Industrializing Countries? Comparing China and India to the United States," paper presented at the World Congress of Environmental and Resource Economists, Gothenburg, Sweden, June 2018.
- (and Kevin J. Boyle and Michael W. Hanemann), "What Are U.S. Households Willing to Pay to Avoid the Harm to the Environment from the Deepwater Horizon Oil Spill?," presentation at the European Association of Environmental and Resource Economists Meeting, Athens Greece, June 2017.
- (and Mikolaj Czajkowski) "A New Baseline Model for Estimating Willingness to Pay from Discrete Choice Models," paper presented at the Association of Environmental and Resource Economists Summer Meeting, Pittsburgh, June 2017.
- "Potential Relevance of Recent Work in Environmental Economics," presentation at Guidelines for Benefit-Cost Analysis: Scoping Workshop, Bill and Melinda Gates Foundation, Seattle, May 2017.
- (and Mikolaj Czajkowski) "A New Baseline Model for Estimating Willingness to Pay from Discrete Choice Models," paper presented at the annual W3133 Meeting on the

- Benefits and Cost of Natural Resourced Policies Affecting Ecosystem Services on Public and Private Lands, Carlsbad, California, February 2017.
- “The 2010 Gulf of Mexico Oil Spill Estimating the Economic Losses: Total Value,” presentation at the Association of Environmental and Resource Economics Summer Conference,” Breckenridge, Colorado, June 2016.
- “Pollution and Health,” presentation at Symposium on Caring for our Common Home: Economics, Environment, & Catholic Social Thought, Lumen Christi Institute, Chicago, May 2016.
- (and Tamara L. Sheldon and J.R. DeShazo), “Designing Policy Incentives for Cleaner Technologies: Lessons from California’s Plug-in Electric Vehicle Rebate Program,” Transportation Research Board 94th Annual Meeting, Washington, January 2015.
- “The Benefits and Costs of Government Action and Inaction,” keynote address at the Economic Society of Australia’s Cost-Benefit Forum, Sydney, July 2014.
- (and Garey Ramey and Jeffrey O’Hara), “Optimal Reliability for a Water Authority,” paper presented at the World Congress of Environmental and Resource Economists, Istanbul, June 2014.
- “The Incentive and Informational Structure of Stated Preference Questions,” keynote address at the International Choice Modelling Conference, Sydney, June 2013.
- (and Mikolaj Czajkowski), “A New Baseline Model for Estimating Willingness to Pay from Discrete Choice Models,” paper presented at the International Choice Modelling Conference, Sydney, June 2013.
- (and J.R. DeShazo, Kurt Schwabe, and Jeffrey Vincent) “Middle Income Developing Country Willingness to Pay for Tropical Rainforest Protection,” paper presented at the International Choice Modelling Conference, Sydney, June 2013.
- “Contingent Valuation 20 Years After the Exxon Valdez Study: What Have We Learned?” keynote address at the National Bureau of Economic Research Summer Institute Meeting Environmental and Energy Economics Meeting,” Cambridge, July 2012.
- (and Kevin Novan), “Economics of Bulk Electricity Storage with Intermittent Renewables,” paper presented European Association of Environmental and Resource Economists Meeting, Prague, June 2012.
- (and J.R. DeShazo, Kurt Schwabe and Jeffery Vincent), “Valuing the Protection of Belum-Temengor to the Malaysian Public,” paper presented European Association of Environmental and Resource Economists Meeting, Prague, June 2012
- “New Approaches to Pollution Control,” keynote address at the 13th Annual Colorado University Environmental and Resource Economics Workshop, October 2011.
- (and Nada Wasi) “The Influence of Rebate Programs on the Demand for Water Heaters: The Case of New South Wales,” paper presented at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011.
- (and J.R. DeShazo, Kurt Schwabe and Jeffery Vincent), “Valuing Poaching and Logging Protection Policies for Tropical Forest Ecosystems,” paper presented at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011.
- (and Maria Damon and Joel Watson), “A New (Economic) Approach to Environmental Technology Standards,” paper presented at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011.

- (and Jorge Arana, Towhidul Islam, Jordan Louviere, and Riccardo Scarpa, “Temporal Reliability of Discrete Choice Experiments,” presentation at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011.
- (and Bart Frishknecht, Christine Ebling, Jordan Louviere, and John Rose), “Designing DCEs to Estimate Choice Modes (Or Equivalent) for Each person in a Sample,” presentation at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011.
- (and Jordan Louviere, Jorge Arana, Sandra Burke, Bart Frishknecht, John Rose, Ricardo Scarpa, and Paul Wang), “Differences in Empirical Outcomes Associated with Different Design Approaches: 64 DCEs for Carbon Trading Schemes and Solar Panels,” presentation at the Association of Environmental and Resource Economists Summer Conference, Seattle, June 2011
- “The Process of Allocating Fish and Water: Soul Mates Separated at Birth,” presentation at the International Seafood Sustainability Allocation Workshop, Yontville, CA, February 2011.
- (and Jacob La Riviere) “Uncertainty in the Relationship Between Emissions and Ambient Pollution Levels and Optimal Pollution Control,” 12th Occasional California Workshop on Environmental Economics, Santa Barbara, CA, October 2011.
- (and Jordan J. Louviere and Edward Wei), “A Funny Thing Happened on the Way to the Emission Trading Scheme,” paper presented at the 5th Annual Choice Modeling Workshop, Adelaide Australia, July 2010.
- (and Ian Bateman, Brett Day Ian Bateman, Diane Dupont, Jordan J. Louviere, Sanae Morimoto, Riccardo Scarpa and Paul Wang, “Task Independence in Stated Preference Studies: A Test of Order Effect Explanations” paper presented at the 4th World Congress of Environmental and Resource Economists, Montreal, July 2010.
- (and Phoebe Koundouri, and Céline Nauges), “Arsenic Mitigation in Bangladesh: A Household Labor Market Approach,” paper presented at the 4th World Congress of Environmental and Resource Economists, Montreal, July 2010.
- (and Ian Bateman, Brett Day Ian Bateman, Diane Dupont, Jordan J. Louviere, Sanae Morimoto, Riccardo Scarpa and Paul Wang, “Task Independence in Stated Preference Studies: A Test of Order Effect Explanations” paper presented at the U.S.D.A. W-2133 Meeting, Tucson, AZ.
- (and Phoebe Koundouri, and Céline Nauges), “Arsenic Mitigation in Bangladesh: A Household Labor Market Approach,” paper presented at the American Agricultural Economics Association Meeting, Atlanta, January 2010.
- (and Maria Damon), “A New Approach to Environmental Technology Standards,” paper presented at the European Association of Environmental and Resource Economics, Amsterdam, June 2009.
- (and Paul Metcalfe, Bill Baker, Kevin Andrews, Giles Atkinson, Ian Bateman, Sarah Butler, Richard Carson, Jo East, Yves Guenon, Rob Sheldon and Kenneth Train), “An Assessment of the Non-Market Benefits of the Water Framework Directive to Households in England and Wales,” paper presented at the European Association of Environmental Economics and Management, Amsterdam, June 2009.

- (and Maria Damon), "A New Approach to Environmental Technology Standards," paper presented at the Association for Public Policy Analysis and Management, Los Angeles, November 2008.
- "The Evolution of Economic Policy on Climate Change," Trevor Swan Lecture, Australian National University, August 2008.
- (and Clive Granger, Jeremy Jackson, and Wolfram Schlenker), "Fisheries Management Under Cyclical Population Dynamics," paper presented at the American Agricultural Economics Association Meeting, Orlando, FL, July 2008.
- (and Ian J. Bateman, Brett Day, Diane Dupont, Jordan J. Louviere, Sanae Morimoto, Riccardo Scarpa, and Paul Wang), "Choice Set Awareness and Ordering Effects in Discrete Choice Experiments," paper presented at the European Association of Environmental and Resource Economists, Gothenburg, Sweden, June 2008.
- "China and the Changing Face of World CO₂ Emissions," presentation at the Future in Review 2008 Conference, Coronado, CA, May 2008.
- "Contingent Valuation: Where from and Where To," keynote address at Conference on Economic Valuation of the Environment," Department of the Environment, Food, and Rural Affairs, United Kingdom, London, November 2006.
- "On the Use of Contingent Valuation," Stockholm Seminar, Royal Swedish Academy of Sciences, September 2006.
- (and Shelia Walsh), "Preventing Damages from Oil Spills: Lessons from the Exxon Valdez," paper presented at Workshop on Les Dommages Ecologiques Causes' par les Marées Institut Océanographique Noires: Evaluations Economiques et Indemnisations," Paris, May 2006.
- "Archetypal Analysis", Keynote presentation at the Salford System Data Mining Conference, San Diego, March 2006.
- (and Jason Murray), "Fisheries Management Implications of Intrinsic Under Identification of Growth Equation Parameters," paper presented at the American Agricultural Economics Association Meeting, Providence RI, August 2005.
- (and Tolga Cenesizoglu and Roger Parker), "Aggregation Issues in Forecasting Aggregate Demand: An Application to U.S. Commercial Air Travel," paper presented at the American Marketing Association's Advanced Research Techniques Forum, Coeur d'Alene, ID, June 2005.
- (and Clive Granger, Jeremy Jackson, and Wolfram Schlenker), "Are Current Fisheries Management Models Wrong? An Error Correction Approach to Reconciling the Historical Records on Fish Stocks," Allied Social Sciences Meeting, Philadelphia, PA, January 2005.
- (and Maria Damon), "Pollution Control Policies Aimed at Consumers: Evidence from Recreational Boaters in San Diego Bay," paper presented at the European Association of Environmental and Resource Economists, Budapest, June 2004.
- (and Theodore Groves, John List and Mark Machina), "Probabilistic Influence and Supplemental Benefits: A Field Test of the Two Key Assumptions Underlying Stated Preferences," paper presented at the European Association of Environmental and Resource Economists, Budapest, June 2004.

- (and Theodore Groves, John List and Mark Machina), "Probabilistic Influence and Supplemental Benefits: A Field Test of the Two Key Assumptions Underlying Stated Preferences," paper present at NBER Public Economics Workshop, Palo Alto, March 2004.
- "Air Travel Passenger Demand Forecasting," presentation at the Predictive Methodology and Application in Economics and Finance Conference in Honor of Clive Granger, La Jolla, CA, January 2004.
- "Contingent Valuation of Tropical Rainforest," presentation at Workshop on International Financing of Biodiversity Conservation in Developing Countries, La Jolla, December 2003.
- (and Theodore Groves, John List and Mark Machina), "Probabilistic Influence and Supplemental Benefits: A Field Test of the Two Key Assumptions Underlying Stated Preferences," paper present at the Workshop on Advancing the Methodology of Discrete Choice Experiment in Health Economics, Oxford, September 2003.
- "A Experiencia da Valoración de Danos Nos Recursos Naturais e Ambientais Polo Exxon Valdez," presentation at Efectos Economicos, Sociais e Ambientais da Maree Negra Do 'Prestige', Seminario Cientifico Internacional, Santiago de Compostela, Spain, March 2003.
- (and Moshe Ben-Akiva, Denis Bolduc, David Bunch, Jordan Louviere, Hikaru Phillips and Matthew Symons), "Identifying Optimal Offerings and Campaigns in Interactive Channels Using Real-Time Experiments and Automated Modeling Procedures," paper present at the American Marketing Association Advanced Research Techniques Forum, Vail Colorado, June 2002.
- (and Theodore Groves, John List and Mark Machina), "Probabilistic Influence and Supplemental Benefits: A Field Test of the Two Key Assumptions Underlying Stated Preferences," paper present at the Second World Congress of Environmental and Resource Economists, Monterey California, June 2002.
- (and Maria Damon, Leigh Johnson, and Jamie Miller), "Conceptual Issues in Transitioning from Copper Hull Coatings on Recreational Boats to Non-Toxic Alternatives," paper present at the Second World Congress of Environmental and Resource Economists, Monterey California, June 2002.
- "The Contingent Valuation Debate: Lessons for the Valuation of Cultural Resources," paper presented at Conference on the Contingent Valuation of Culture, Chicago, February 2002.
- "Contingent Valuation Controversies and Evidence," Keynote Address, 6th Occasional California Workshop on Environmental and Resource Economics, Santa Barbara, October 2001.
- (and Maximillian Auffhammer and Theresa Garin-Munoz), "Exploring Structural Differences in CO2 Emissions of China's Provinces," paper presented at the European Association of Environmental and Resource Economists Meeting, Southampton, UK, June 2001.
- (and Anna Alberini), "Yea Sayers, Nay Sayers, or Just Plain Confused: Mixtures of Populations in Contingent Valuation Survey Responses," paper presented at the European Association of Environmental and Resource Economists Meeting, Southampton, UK, June 2001.

- (and Dan Steinberg, D. Agarwal and J.Y.A. Rupp), Winner KDD Cup 2000 for Web Analytics, at Sixth ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Boston, August 2000.
- (and Yongil Jeon) "On Overcoming Informational Deficiencies in Estimating Willingness to Pay Distributions," paper presented at the American Agricultural Economics Association Meeting, Tampa, FL, August 2000.
- (and Yongil Jeon) "On Overcoming Informational Deficiencies in Estimating Willingness to Pay Distributions," paper presented at European Association for Environmental and Resource Economists Meeting, Rhythmon Greece, June 2000.
- (and Theodore Groves and Mark J. Machina), "Incentive and Informational Properties of Preference Questions," invited paper, Conference on the Theory and Application of Environmental Valuation Japan Forum of Environmental Valuation Kobe, Japan, January 2000
- (and Theodore Groves and Mark J. Machina), "Incentive and Informational Properties of Preferences Questions," Plenary Address, European Association of Environmental and Resource Economists, Oslo Norway, June 1999.
- (and Robert Cameron Mitchell), "Public Preferences Toward Environmental Policies: The Case of Trihalomethanes," paper presented at the Society for Risk Analysis Meeting, Phoenix, December 1998)
- (and Changhua Rich), "Per Capita Pollution Emissions Across China's Provinces: Explaining the Differences," presentation at the 4th Occasional California Workshop on Environmental and Resource Economics, University of California, Santa Barbara, October 1998.
- (and Nicholas E. Flores, and Norman F. Meade), "Contingent Valuation: Controversies and Evidence," paper presented at the World Congress of Environmental Economists, Venice, June 1998.
- (and Jordan J. Louviere), "Archetypal Analysis and Segmentation," paper present at the American Marketing Association Advanced Research Techniques Forum, Keystone Colorado, June 1998.
- (and Theodore Groves and Mark J. Machina), "Incentive Compatibility Issues in Stated Preference Surveys," paper presented at the National Oceanic and Atmospheric Administration Workshop on Application of State Preference Methods to Resource Compensation, Washington, June 1998.
- (and Allyson Ankerbrand, Jon A. Krosnick, and Robert Cameron Mitchell), "Violating Conversational Conventions Disrupts Cognitive Process of Survey Questions," paper presented at the annual conference of the American Association for Public Opinion Research, St. Louis, May 1998.
- (and Theodore Groves and Mark J. Machina), "Economic Responses to Preference Surveys," paper presented at the annual U.S.D.A. W-133 meeting, Colorado Springs, CO, March 1998.
- (and Theodore Groves and Mark J. Machina), "Stated Preference Questions: Context and Optimal Response," paper presented at the Econometric Society Summer Meeting, California Institute of Technology, June 1997.
- (and Theodore Groves and Mark J. Machina), "Comparative Statistics of Approaches to Eliciting Economic Values," presentation at 1997 NSF/EPA Workshop on Valuation and Environmental Policy, Arlington, VA, May 1997.

- (and Dan Steinberg and Leo Breiman), "Broad Scale Missing Value Imputation with Iterative Binary Partitioning," paper presented at Second World Conference of the International Association for Statistical Computing, Pasadena, February 1997.
- (and Nicholas E. Flores), "A Dynamic Characterization of Temporary Rationing: Implications for Natural Resource Valuation," invited paper presented at the Third Occasional California Workshop on Environmental and Resource Economics, University of California, Santa Barbara, May 1996.
- (and Theodore Groves and Mark J. Machina), "Informational and Strategic Properties of Value Elicitation Procedures," paper presented at the INFORMS Conference, Washington, DC, May 1996.
- (and Theodore Groves and Mark J. Machina), "Informational and Strategic Properties of Value Elicitation Procedures," paper presented at the annual U.S.D.A. W-133 meeting, Jekyll, Island, GA, February 1996.
- (and Nicholas E. Flores, and Norman F. Meade), "Contingent Valuation: Controversies and Evidence," paper presented at the Western Economic Association Annual Conference, San Diego, July 1995.
- "Economic Considerations in Designing and Conducting Ecotoxicological Risk Assessments," presentation at California Environmental Protection Agency Workshop on Case Studies in Ecological Risk Assessments, Irvine, June 1995.
- "The Economic Structure of Non-Market Valuation Systems: Puzzles and Some Answers," invited paper presented at the Australian Agricultural Economics Society 39th Annual Conference, Perth, Western Australia, February 1995.
- "The Who, What, Where, Why, and How of NRDA," panel presentation at the OPA '90 Revisited Conference, Maritime Association of the Port of New York and New Jersey, New York, January 1995.
- (and Nicholas E. Flores) "The Relationship Between the Income Elasticities of Demand and Willingness to Pay," paper presented at the Association of Environmental and Resource Economists meeting, Washington D.C., January 1995.
- "Valuation of Tropical Rainforest: Philosophical and Practical Issues in the Use of Contingent Valuation," invited paper at Third Biennial Meeting International Society for Ecological Economics, San José, Costa Rica, October 1994.
- (and W.J. Sieber, T.G. Ganiats, and S.B. Cantor), "Discounting Future Health: Moderating Effects of Age, Sex, and Education," Paper presented at the annual meeting of the Society for Medical Decision Making, 1994. Abstract in *Medical Decision Making*, Vol. 14, 1994.
- "Contingent Valuation Surveys and Tests of Insensitivity to Scope," paper presented at the International Conference on Determining the Value of Nonmarketed Goods: Economic Psychological, and Policy Relevant Aspects of Contingent Valuation Methods, Bad Homburg, Germany, July 1994.
- (and T.G. Ganiats, R. Hamm, S.J. Spann, M.D. Hagen, and S.B. Cantor), "Population-Based Discounting of Future Health Outcomes," paper presented at Association for Health Services Research, San Diego, June 1994. Abstract on *Medline*.
- (and Nicholas E. Flores, Kerry M. Martin, and Jennifer L. Wright), "Contingent Valuation and Revealed Preference Methodologies Comparing the Estimates for Quasi-Public Goods," paper presented at the annual U.S.D.A. W-133 meeting, Tucson, Arizona, February 1994.

"Future Research Implications of the NOAA Panel Report on Contingent Valuation," invited presentation at American Economic Association meeting, Boston, January 1994.
 (and Anna Alberini and Barbara J. Kanninen), "A General Model for Double-Bounded Discrete Choice Contingent Valuation Data," presented at the Association of Environmental and Resource Economists, Boston, January 1994.

"Current Directions in Recreation Demand Modeling," Invited presentation at International Conference on Regional Water Management, Berkeley, October 1993
 (and Robert Cameron Mitchell), "Issues of Scope and Sequence in Contingent Valuation," invited paper presented at the American Association of Agricultural Economics meeting, Orlando, Florida, August 1993.

"The CV Methodological Lessons from the Exxon Valdez and Blue Ribbon Panel Experiences," presentation at the California Workshop on Environmental and Resource Economics and Policy, Santa Barbara, May 1993.

"The Development of Alaska's Exxon Valdez Contingent Valuation Instrument: The Measurement of Passive-Use Values," paper presented at the annual U.S.D.A., W-133 meeting, Santa Fe, New Mexico, March 1993.
 (and W. Michael Hanemann) "Issues in the Assessment of Damages from Oil Spills," invited presentation at the Society for Risk Analysis annual meeting, Coronado, CA, December 1992.

"The Contingent Valuation Method and Environmental Damage Assessment," invited presentation at Southern Economic Association, Washington, November 1992.
 (and Nicholas E. Flores and W. Michael Hanemann) "On the Creation and Destruction of Public Goods: The Matter of Sequencing" paper presented at European Association of Environmental and Resource Economists meeting, Krakow, Poland, June 1992.

"The Current State of Natural Resource Damage Assessment," invited address presented to the Natural Resource Modeling Association Conference, Berkeley, June 1992.
 (and Nicholas E. Flores and W. Michael Hanemann) "On the Nature of Compensable Value in a Natural Resource Damage Assessment," invited paper presented at the annual American Economics Association Meeting, New Orleans, January 1992.
 (and Michael B. Conaway, W. Michael Hanemann, Raymond J. Kopp, Kerry Martin, Robert C. Mitchell, Stanley Presser and Paul A. Ruud), "Valuing Winter Visibility Improvements in the Grand Canyon," paper presented at Association of Environmental and Resource Economists meeting, New Orleans, January 1992.
 (and Robert Cameron Mitchell), "Nonuse Values and Contingent Valuation," invited paper presented at Southern Economic Association meeting, Nashville, November 1991.
 (and John Horowitz), "The Demand for Government Regulation of Environmental Health Risks," paper presented at the Association for Public Policy Analysis and Management Conference, Bethesda, October 1991.

"The Value of Winter Visibility Improvements in the Grand Canyon," paper presented at the Summer NBER Tax Workshop, Cambridge, August 1991.
 (and John Horowitz), "A Classification Tree for Predicting Consumer Preferences for Risk Reduction," invited paper presented at the summer meeting of the American Agricultural Economics Association, Manhattan Kansas, August 1991.
 (and William Balson and Robert Mitchell) "The Grand Canyon Visibility Benefits Study," paper presented at the annual meeting of the Air and Waste Management Association, Vancouver, June 1991.

"The Economic Value of Preventing Water Shortages," paper presented at the European Association of Environmental and Resource Economists, Stockholm, June 1991.

"Visibility at the Grand Canyon Revisited," paper presented at the Western Regional Sciences/W-133 Meeting Monterey, February 1991.

(and John Horowitz), "Does the Public Really Care About Risk Characteristics," paper presented at Society for Risk Analysis meeting, New Orleans, October 1990.

(and John Horowitz), "Do Consumers Really Care About the Characteristics of Health Risks," paper presented at the Association of Environmental and Resource Economist Meeting, Vancouver, August 1990.

(and Francis Lim and Mark Machina), "Forecasting State Lotto Sales: Micro and Policy Implications," paper presented at the Fifth International Conference on the Foundations and Applications of Utility, Risk, and Decision Theory, Durham, North Carolina, June 1990.

(and John Horowitz), "Which Risks Are Important? The Case of Food Safety," paper presented at Economics of Food Safety Workshop, Alexandria, VA, June 1990.

(and Anna Alberini), "The Efficiency of Discrete Choice Estimation," paper presented at Western Regional Sciences/W-133 Meeting Molokai, Hawaii, February 1990.

(and John Horowitz), "The Many Facets of Risk: Valuing the Characteristics," paper presented at the Association of Environmental and Resource Economists Meeting, Atlanta, December 1989.

"The Tobit Model with a Non-Zero Censoring Threshold," paper presented at the Econometric Society Meeting, Atlanta, December 1989.

"Value of Diamonds and Water: Water Supply Reliability in Southern California," paper presented at Association for Public Policy Analysis and Management, Washington D.C., November 1989.

(and Robert Cameron Mitchell and Paul Ruud), "Valuing Air Quality Improvements: Simulating a Hedonic Pricing Equation in the Context of a Contingent Valuation Scenario," paper presented at the annual Air Pollution Control Association meeting, Estes Park, Colorado, October 1989.

(and Dan Steinberg), "Experimental Design for Discrete Choice Voter Preference Surveys," paper presented at the annual meeting of the American Statistical Association, Washington, D.C., August 1989.

(and W. Michael Hanemann and Thomas Wegge) "A Nested Logit Model of Recreational Fishing Demand in Alaska," paper presented at the annual Western Economic Association Conference, Lake Tahoe, June 1989.

(and Peter Navarro), "Role of Regulation in Explaining Trade Flows," paper presented at 2nd University of California Conference on Economics Issues of the Pacific Rim, Davis, April 1989.

"Contingent Valuation: Using Surveys to Price Public Goods," invited paper presented at American Association for Public Opinion Conference, Monterey, March 1989.

(and Dan Steinberg) "Estimation of Demand Curves via Survival Analysis," invited presentation at Winter Meeting of the American Statistical Association, San Diego, January 1989.

(and Ciaran S. Phibbs), "Influence of Specific Services on the Shape of Hospital Market Areas," paper presented at Western Economics Association meeting, Los Angeles, July 1988.

- (and Robert Cameron Mitchell) "On the Use of Contingent Valuation in Natural Resource Damage Cases," paper present at Natural Resources Damage Assessment Conference, Washington, DC, June 1988.
- (and W. Michael Hanemann) "Valuing Quality in a Recreational Fishery Using a Generalized Logit Model," paper presented at the annual U.S. Department of Agriculture W-133 Conference on Research Issues in Resource Decisions Involving Marketed and Nonmarketed Goods, Monterey, January 1988.
- "What Components of Value Should Be Included in a Benefit/Damage Estimate", presentation at the annual U.S. Department of Agriculture W-133 Conference on Research Issues in Resource Decisions Involving Marketed and Nonmarketed Goods, Monterey, January 1988.
- (and Peter Navarro), "Special Interest and Ideology in the Dispute Over Natural Resource Damage Assessment: Economists Caught in a Methodological Crossfire," invited paper presented at the American Economic Association meeting, Chicago, 1987.
- (and Robert Cameron Mitchell), "Valuing Reductions in Environmental Risk: The Case of Trihalomethanes," paper presented at the Association for Public Policy Analysis and Management meeting, Washington D.C., October 1987.
- (and Theodore Graham-Tomasi), "An Economic Perspective on Natural Resources Damage Assessment Regulations," paper presented at the Association for Public Policy Analysis and Management, Washington D.C., October 1987.
- (and James Chalfant and Kenneth White), "Demand System Specification and Out-of-Sample Prediction Rates", paper presented at the Econometric Society Summer Meeting, University of California, Berkeley, June 1987.
- (and Robert Cameron Mitchell), "How Far Out on the Learning Curve Are We with Contingent Valuation?", paper presented at Engineering Foundation-Universities' Council on Water Resources Conference on the Role of Social/Behavior Science in Water Resource Management Santa Barbara, May 1987.
- (and Robert Mitchell), "Evidence of Bias in Amenity Valuation," paper presented at Workshop on Integrating Economic and Psychological Knowledge in Valuation of Public Amenity Resources (U.S. Forest Service), Estes Park, CO, May 1986.
- "The Use of Dichotomous Choice Formats for Contingent Valuation: Current Research Issues and Concerns," presentation at annual U.S. Department of Agriculture W-133 Conference on Research Issues in Resource Decisions Involving Marketed and Nonmarketed Goods, San Diego, February 1986.
- (and Robert Cameron Mitchell), "Not in My Backyard or the Economic Cost of Siting Opposition," invited paper presented at the annual American Economics Association Meeting, New York, December 1985.
- "Splitting, Smoothing, and Resampling: Computer Intensive Statistics and Their Use in Economics and the Social Sciences," paper presented at the 5th World Congress of the Econometric Society, Massachusetts Institute Technology, August 1985.
- (and James Chalfant), "Causality Tests Without Linearity or Normality," paper presented at Econometric Society 5th World Congress, MIT, August 1985.
- (and Shankar Subramanian), "A Fast Robust Data Smooth Using An L-Estimator," paper presented at American Statistical Association Meeting, Las Vegas, August 1985.
- "SAS Macros for Bootstrapping and Cross-Validating Regression Equations," paper presented at SAS Users Group International 10th Annual Conference, Reno Nevada,

March 1985.

(and Shankar Subramanian), "Robust Regression: A Synthesis of Developments Involving Distribution Theory and Non-Spherical Errors," paper presented at Econometric Society meeting, Dallas, December 1984.

"Compensating for Missing Data and Invalid Responses in Willingness to Pay Surveys," paper presented at American Statistical Association meeting, Philadelphia, 1984.

(and Robert Cameron Mitchell), "Fresh Water Quality Benefits: Findings from a New National Contingent Valuation Study," invited paper presented at Joint Meeting of the American Agricultural Economics Association and the Association of Environmental and Resource Economists, Cornell University, August 1984.

(and Alan Love and Fabienne Keller-Griesmar), "The Soviet Grain Import Decision as an Optimal Control Problem," paper presented at American Agricultural Economics Association meeting, Cornell University, August 1984. Abstract in *American Journal of Agricultural Economics*, vol. 66, p. 908.

(and William E. Foster), "A Theory of Auctions from the Auctioneer's Perspective," paper presented at Econometric Society Summer meeting, Stanford University, June 1984.

(and Robert Cameron Mitchell), "Public Perceptions of Risk and Local Siting Issues," paper presented at Western Social Sciences Association meeting, San Diego, April 1984.

"Ordinal and Dummy Variables: An Errors-in-Variables Approach," paper presented at Econometric Society Meeting, San Francisco, December 1983.

SEMINARS PRESENTED

Academia Sinica, Agricultural University of Norway, Athens University of Business and Economics, Australian National University, University of Auckland, Lincoln University, University of California, Berkeley, University of California, Davis, University of California, Irvine, University of California, Los Angeles, University of California, Riverside, University of California, San Diego, University of California, Santa Barbara, University of Chicago, Chung-Hua Institution for Economic Research (Taipei), University of Colorado, Boulder, Columbia, Cornell, University College, Dublin, Duke University, University of East Anglia, East-West Center at the University of Hawaii, University of Exeter, University of Florida, Forest Research Institute Malaysia, Göteborg University, Harvard University, University of Haifa, Hebrew University, University of Economics Ho Chi Minh City, University of Illinois, University College, London, London School of Economics, University of Maryland, Massey University, Massachusetts Institute of Technology, University of Michigan, Michigan State University, University of New South Wales, New York University, University of Oslo, Oregon State University, Peking University, University of Pennsylvania, Rand Corporation, Research Triangle Institute, Resources for the Future, University of Saarland San Diego State University, Stanford University, Stockholm School of Economics, University of Southern California, Sungkyunkwan University, University of Sydney, University of Technology, Sydney, TERI University (Delhi), Tokyo Institute of Technology, U.S. Environmental Protection Agency, University of Venice, University of Washington, Seattle, University of Warsaw, University of Wisconsin, Madison, Washington State University, World Health Organization, Xi'an Jiaotong University.

PROFESSIONAL MEMBERSHIPS

Agricultural and Applied Economics Association (Elected Fellow), American Association for the Advancement of Science (Elected Fellow), American Association for Public Opinion Research, American Economic Association, American Marketing Association, American Statistical Association, Association of Environmental and Resource Economists (Elected Fellow), Econometric Society, European Association of Environmental and Resource Economists, International Society for Ecological Economics, Sigma Xi, Western Economics Association.

PROGRAM AFFILIATIONS (Current and Past)

National Research Council (NRC) Committee on Oil Spill Research and Development
NRC Committee on Assessment of Water Resources Project Planning Procedures
Conference on Research on Income and Wealth
National Bureau of Economic Research, Faculty Research Fellow, Program in Public Economics
U.S. Environmental Protection Agency, Science Advisory Board (Environmental Economics)
University of California Center for Energy and Environmental Economics
UCSD: Center for Environmental Economics, Halicioğlu Data Science Institute, Institute for Neural Computation, Center for U.S.-Mexican Studies
UCSD John Muir College, Elected Fellow
San Diego Supercomputer Center, Senior Fellow
Scripps Institution of Oceanography, Center for Marine Biodiversity and Conservation

CONTRACTS AND GRANTS

Principal investigator or co-principle investigator on contracts and grants totaling over 50 million dollars. Funding sources have included Federal agencies such as the Department of Commerce, the National Science Foundation and the U.S. Environmental Protection Agency, state agencies such as the Alaskan Department of Fish and Game and the California Resources Agency, international organizations such as the World Bank and private foundations such as Electric Power Research Institute and the Hewlett Foundation.

CONSULTANT

Accent, Alaska Department of Law, Alaska Department of Fish and Game, American Council of Learned Societies, Australian Bureau of Agriculture and Resource Economics, Australian Resource Assessment Commission, Battelle Pacific Northwest Laboratories, Boeing, California Attorney General's Office, California Department of Fish and Game, California Energy Commission, City of San Diego, Computer Intelligence/Ziff Davis, Dakessian Law, Ltd., Dames and Moore, Decision Focus, DLA Piper, Electric Power Research Institute, Environment Canada, Hazen and Sawyer, Inc., HBRS, Inc., Illinois Department of Energy and Natural Resources, Industrial Economics, KPMG, Los Angeles Department of Water and Power, Memetrics (Chief Scientist, now a part of Accenture Marketing Science), Metropolitan Water District of Southern California, Motorola, National Association of Broadcasters, National Economic Research Associates, National Oceanic and Atmospheric Administration, National Wildlife Federation, New Jersey Department of Environmental Conservation, Organization for Economic

Cooperation and Development, Price Waterhouse, QED Research, Research Triangle Institute, Salford Systems, Salt River Project, San Diego Association of Governments, South Florida Water Management District, Spectrum Economics, STICS, Stone Analytics, United Kingdom Department of Environment, Food and Rural Affairs, United Kingdom, Ministry of Justice, United Nations, U.S. Department of Agriculture, U.S. Army Corp of Engineers, U.S. Department of Commerce, U.S. Department of Energy, U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Department of Interior, U.S. Department of Justice, U.S. National Park Service, World Bank.

CONFERENCE PROGRAM COMMITTEES

Program Chair, Second World Congress of Environmental and Resource Economists (2002)
Co-Chair, International Choice Modelling Conference (2013)
Program Committee, American Association for the Advancement of Sciences (2013-2014)
American Association of Public Opinion Research (various years)
American Association of Agricultural Economics (various years)
Association of Environmental and Resource Economists (various years)
European Association of Environmental and Resource Economists (various years)
International Choice Symposium (various years)
World Congress of Environmental and Resource Economists (various years)

WHO'S WHO

Who's Who in Economics, Who's Who in America, Who's Who in the West, Who's Who in Finance and Industry

EDITORIAL POSITIONS (Current and Past)

Co-Editor: *Foundations and Trends in Microeconomics*
Editorial Boards: *Contemporary Economic Policy*, *Environmental and Resource Economics*, *Journal of Environment and Development*, *Journal of Environmental Economics and Management*

REVIEWER

Addison-Wesley, *Agricultural Economics*, *Agricultural and Resource Economics Review*, *American Economic Review*, *American Journal of Agricultural Economics*, *American Journal of Economics: Economic Policy*, *American Journal of Economics: Microeconomics*, *American Journal of Public Health*, *Applied Economics*, *Australian Journal of Agricultural and Resource Economics*, *Australian Journal of Management*, *B.E. Journal of Economic Analysis and Policy*, California Sea Grant, Cambridge University Press, Chapman and Hall, Chicago Lung Association, *Coastal Management Journal*, *Contemporary Economic Policy*, *Ecological Economics*, *Econometric Theory*, *Econometrica*, *Economic Development and Cultural Change*, *Economic Inquiry*, *Economic Journal*, *Economic Letters*, *Economics*, *Energy Journal*, *Environment and Development Economics*, *Environment & Planning C: Government and Policy*, *Environmental and Resource Economics*, *Environmental Conservation*, *European Economic Review*, *Foundations and Trends in*

Microeconomics, GeoForum, Health Economics, John Wiley, Journal of Agricultural and Resource Economics, Journal of Applied Econometrics, Journal of Choice Modelling, Journal of Comparative Economics, Journal of Development Economics, Journal of Econometrics, Journal of Economic Education, Journal of Economic Literature, Journal of Economics and Business Statistics, Journal of Economic Psychology, Journal of Energy Storage, Journal of Environmental Assessment Policy and Management, Journal of Environment and Development, Journal of Environmental Economics and Management, Journal of Environmental Management, Journal of Food Distribution Research, Journal of Health Economics, Journal of Law, Economics and Organization, Journal of Neuroscience, Psychology, and Economics, Journal of Political Economy, Journal of Politics, Journal of International Economics, Journal of Law and Economics, Journal of Public Economics, Kluwer Academic Publishers, Leisure Sciences, Lifetime Data Analysis, Management Science, Marine Ecology Progress Series, Michigan Sea Grant Program, Natural Resource Modeling, National Oceans Economics Program, National Science Foundation, Nature, Oxford Economic Papers, Oxford University Press, Policy Sciences, Policy Studies Journal, Prentice-Hall, Princeton University Press, Proceedings of the National Academy of Sciences, Public Opinion Quarterly, Quarterly Journal of Economics, Public Budgeting and Finance, Rand Journal of Economics, Regional Science and Urban Economics, Review of Economic Studies, Review of Economics and Statistics, Review of Economics of the Household, Review of Environmental Economics and Policy, Review of Economic Studies, Resource and Energy Economics, Risk Analysis, Rockefeller Foundation, Scandinavian Journal of Economics, Science of the Total Environment, Social Networks, Social Sciences and Humanities Research Council (Canada), Southern Economic Journal, Springer, Statistica Sinica, Sustainability, Transportation Research Part A: Policy and Practice, University of California Water Resources Center, Wadsworth Advanced Books, Water Economics and Policy, Water International, Water Resources Research, Western Journal of Communication, Western Journal of Agricultural Economics, Western Regional Center of the National Institute for Global Environmental Change, World Bank Economic Review, World Development.